

Ephemerides *1793*
ῬΑΤΑΑΣ ΟΥΡΑΝΙΟΣ,
The COELESTIAL ATLAS;

OR, A NEW
E P H E M E R I S

For the YEAR of our LORD 1793.

Being the First after
BISSEXTILE, or LEAP-YEAR.

Wherein are contained
The Heliocentrick and Geocentrick Places of the Planets,
the ECLIPSES of the Luminaries, and other remarkable PHÆNO-
MENA that will happen this Year.

Carefully computed
From the genuine TABLES of Dr. EDMUND HALLEY,
those of Professor MAYER, and other the latest and most correct
ASTRONOMICAL TABLES.

A L S O

A Compleat ALMANACK. containing the FEASTS and FASTS
of the Church of ENGLAND; the Times of the LUNATIONS;
the Rising and Setting of the Sun, Moon, and Planets, &c.

Adapted to the
Meridian and Latitude of the Royal Observatory of
GREENWICH.

To which are added,

Several useful TABLES: As, a TABLE of the Sun's
semi-diurnal Arcs, by which the Times of the Sun's Rising and
Setting may be known by Inspection, on every Day in the Year, and
in any Part of GREAT-BRITAIN or IRELAND; a TIDE-TABLE,
and a very correct one of the Eclipses of JUPITER's first Satellite;
a TABLE of the Sun's Right-Ascension; various ~~correct~~ TABLES of
the most remarkable fixed Stars, corrected from Mr. FLAMSTEED's
Catalogue; and, lastly, a correct TABLE of Latitudes and Longi-
tudes of the most remarkable Places in the World.

By ROBERT WALLIS,

Teacher of the Mathematics,

Οἱ ἀριθμοὶ διηγουμένηται δοξασθεῖς.

The FORTY-FOURTH IMPRESSION.

46.6.24.10 L O N D O N :

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Chronological Notes for the Year 1793.

Golden Number	- - 8	Septuagesima Sund.	Jan. 27
Cycle of the Sun	- - 10	Shrove Sunday	- Feb. 10
The Epact	- - 17	Easter Day	- Mar. 31
Dominical Letter	- F	Whit Sunday	- May 19
Number of Direction	- 10	Trinity Sunday	- May 26
Roman Indiction	- - 11	Advent Sunday	- Dec. 1

Astronomical CHARACTERS explained.

♈ Aries	♋ Cancer	♎ Libra	♏ Capricorn
♉ Taurus	♌ Leo	♍ Scorpio	♐ Aquarius
♊ Gemini	♍ Virgo	♏ Sagittary	♑ Pisces
♄ Saturn	☉ Sol (the Sun)	☾ Luna (the Moon)	♃ Herschel, the New or Georgian Planet.
♃ Jupiter	♀ Venus	♊ Moon's N. Node	
♂ Mars	☿ Mercury	♋ her S. Node	
♌ Conjunction when Planets are in the same Sign, Deg. Min. &c.			
* Sextile when 2 Signs dist.		Δ Trine when 4 Signs dist.	
□ Quartile when 3 Signs dist.		♌ Opposition when 6 Signs dist.	

Of the Four Quarters of the YEAR 1793.

	d	h	m
THE Spring Quarter begins	- - March 20	3	8 morn.
The Summer Quarter begins	- - June 21	1	10 morn.
The Autumnal Quarter begins	- - Sept. 22	2	58 aftern.
The Winter Quarter begins	- - Dec. 21	7	29 morn.

THE beautiful Planet VENUS will be an Evening Star 'till May the 27th; and after that Time she will be a Morning Star to the Year's End.

JUPITER will be a Morning Star 'till the 17th Day of May, then an Evening Star till the 4th of December, at which Time he becomes a Morning Star, and so continues to the Year's End.

The NAMES of the Learned JUDGES of the LAW.

I. Commissioners of the Great Seal.

Sir James Eyre, Sir William Henry Ashurst, Sir John Wilson, Knt.

Right Honourable Sir Richard Pepper Arden, Knt. Master of the Rolls.

II. In the } Right Hon. Lord Kenyon, L. C. J. Sir W. H. Ashurst, Knt.
K. Bench. } Sir Francis Buller, Bart. Sir Nash Grose, Knt.III. In the } R. H. Alex. Lord Loughborough, L. C. J. Sir Henry Gould, Knt.
C. Pleas. } John Heath, Esq; Sir John Wilson, Knt.IV. In the } Sir James Eyre, Knt. L. C. B. Sir Beaumont Hotham, Knt.
Exchequer } Sir Richard Perryn, Knt. Sir Alex. Thompson, Knt.

Sir Alex. M'Donald, Knt. Attor. General; Sir John Scott, Knt. Solic. Gen.

A TABLE of TERMS and Returns for the Year 1793.

Hilary Term begins Jan. 23, ends Feb. 12.

Returns or Effoign-days.		Exc.	Ret.	Ap.	W. D.
In eight Days of St. Hilary,	- - Jan. 20	21	22	23	Wedn.
In fifteen Days of St. Hilary	- - - 27	28	29	30	Wedn.
On the Mor. of the Purif. of the Bl. V. M.	Feb. 3	4	5	6	Wedn.
In eight Days of the Purif. of the Bl. V. M.	9	10	11	12	Tuesd.

Easter Term begins April 17, ends May 13.

In fifteen Days of Easter	- - April 14	15	16	17	Wedn.
From Easter Day in three Weeks	- - 21	22	23	24	Wedn.
From Easter Day in one Month	- - 28	29	30	31	Wedn.
From Easter Day in five Weeks	- May 5	6	7	8	Wedn.
On the Mor. of the Ascension of the Lord	- 10	11	12	13	Monday

Trinity Term begins May 31, ends June 19.

On the Morrow of the Holy Trinity,	- May 27	28	29	31	Friday.
In eight Days of the Holy Trinity,	- June 2	3	4	5	Wedn.
In fifteen Days of the Holy Trinity,	- 9	10	11	12	Wedn.
From the Day of the Holy Trin in 3 Weeks	16	17	18	19	Wedn.

Michaelmas Term begins Nov. 6, ends Nov. 28.

On the Morrow of All Souls	- - - Nov. 3	4	5	6	Wedn.
On the Morrow of St. Martin	- - - 12	13	14	15	Friday.
In eight Days of St. Martin	- - - 18	19	20	21	Thurs.
In fifteen Days of St. Martin	- - - 25	26	27	28	Thurs.

N. B. No Sitzings in Westminster-Hall on the Second of February, Ascension-day, and Midsummer-day.

The Exchequer opens eight Days before any Term begins, except Trinity, before which it opens but four Days.

Note, The first and last Days of every Term, are the first and last Days of Appearance.

BIRTH-DAYS of the ROYAL FAMILY.

KING GEORGE III. June 4, 1738	Prince Aug. Fred. Jan. 27, 1773
Prince of Wales, Aug. 12, 1762	Prince Adolph. Fred. Feb. 24, 1774
Duke of York, August 16, 1763	Princess Mary, April 25, - 1776
Duke of Clarence, Aug. 21, 1765	Princess Sophia, Nov. 3, - 1777
Princess Royal, Septem. 29, 1766	Princess Amelia, Aug. 7, - 1783
Prince Edward, Nov. 2, - 1767	Queen Charlotte, May 19, 1744
Prs. Augusta Sophia, Nov. 8, 1768	Prs. Augusta of Brun. Aug. 11, 1737
Prs. Elizabeth, May 22, - 1770	Duke of Gloucester, Nov. 25, 1743
Prince Ernest Augustus, June 5, 1771	

SOVEREIGNS OF EUROPE, their Accession, &c.

Kingdoms, &c.	To whom subject.	When born.	Began to reign.
England, &c.	George III.	June 4, 1738	Oct. 25, 1760
France	Lewis XVI.	Aug. 23, 1754	May 10, 1774
Russia	Catharine II.	May 2, 1729	July 9, 1762
Spain	Charles IV.	Nov. 11, 1748	Dec. , 1788
Portugal	Mary	Dec. 7, 1734	Feb. 24, 1777
Prussia	Frederic IV.	Sept. 25, 1744	Aug. 17, 1786
Denmark & Norway	Christian VII.	Jan. 29, 1749	Jan. 14, 1766
Sweden	Gustavus IV.	Nov. 1, 1778	Mar. 29, 1792
Germany	Francis II.	Feb. 12, 1767	Mar. 1, 1792
Poland	Stanislaus III.	Jan. 17, 1732	Nov. 25, 1764
Holland	William V.	March 8, 1748	Oct. 11, 1751
Papedom	Pius VI.	Dec. 27, 1717	Feb. 18, 1775
Sardinia	Victor	June 26, 1726	Mar. 20, 1773
Ottoman Empire	Selim III.	July 17, 1761	April 7, 1789

The FULL WEIGHT of the Coins, with the LEAST WEIGHT allowed to pass of the Gold Coin.

Wt. allowed.		Full Wt.	SILVER.		Full Wt.
GOLD.	dwt. gr.	dwt. gr.			dwt. gr.
Guinea, - -	5 8	5 9 $\frac{3}{4}$	A Crown, - -	-	19 8 $\frac{1}{4}$
Half Guinea, -	2 16	2 16 $\frac{6}{8}$	Half Crown, -	-	9 16 $\frac{3}{4}$
Quarter Guinea, I	8	1 8 $\frac{3}{4}$	Shilling, - -	-	3 20 $\frac{3}{4}$
			Six Pence, - -	-	1 22 $\frac{1}{4}$

According to the above proportions it appears, that the value of a lb. of silver is 62 s. or 3 l. 2 s. and of a lb. of gold is 44 $\frac{1}{2}$ guineas, or 46 l. 14 s. 6 d. Also that the oz. of silver is 5 s. 2 d. and the oz. of gold 3 l. 17 s. 10 $\frac{1}{2}$ d. So that the value of the standard gold is 15 times that of the silver, and 1-14th more.

A TABLE of the **KINGS** and **QUEENS** of **ENGLAND**
since the **CONQUEST**.

Kings and Queens	Born A.D.	Began their Reign	Reigned Y. M. D.	Age	Rem. Deaths and Dethroned	Where buried
Will. Conq.	1027	1066 Oct. 14	20 10 26	60	Burst by Leap.	Caen, Norm
Will. Rufus	1057	1087 Sept. 9	12 10 24	43	Slain accidentally.	Winchester
Henry I.	1068	1100 Aug. 2	35 3 29	77		Reading
Stephen	1105	1135 Dec. 1	18 10 24	49		Feverham
Henry II.	1133	1154 Oct. 25	34 8 11	55		Fonteveraud
Richard I.	1156	1189 July 6	9 9 0	43	Slain with an Arrow.	Fonteveraud
John	1165	1199 April 6	17 6 13	50		Worcester
Henry III.	1207	1216 Oct. 19	56 0 28	65		Westminster
Edward I.	1239	1272 Nov. 16	34 7 21	67		Westminster
Edward II.	1284	1307 July 7	19 6 18	43		Gloucester
Edward III.	1312	1327 Jan. 25	50 4 27	65		Westminster
Richard II.	1366	1377 June 21	22 3 8	33	Dep. & murd.	Westminster
Henry IV.	1367	1399 Sept. 29	13 5 20	46		Canterbury
Henry V.	1389	1413 Mar. 20	9 5 11	33		Westminster
Henry VI.	1421	1422 Aug. 31	38 6 4	49	Dep. & murd.	Windsor
Edward IV.	1442	1461 Mar. 4	22 1 5	41		Windsor
Edward V.	1471	1483 April 9	0 2 15	12	Murder'd.	Not known
Richard III.	1443	1483 June 22	2 2 0	42	Slain in Battle.	Leicester
Henry VII.	1456	1485 Aug. 22	23 8 0	52		Westminster
Henry VIII.	1492	1509 April 22	37 9 6	55		Windsor
Edward VI.	1537	1547 Jan. 28	6 5 8	15		Westminster
Mary I.	1516	1553 July 6	5 4 11	42		Westminster
Elizabeth	1533	1558 Nov. 17	44 4 7	69		Westminster
James I.	1566	1603 Mar. 24	22 0 3	58		Westminster
Charles I.	1600	1625 Mar. 27	23 10 3	48		Windsor
Charles II.	1630	1649 Jan. 30	36 0 7	54		Westminster
James II.	1633	1685 Feb. 6	4 0 7	67	Abdicated.	St. Germain
Mary II.	1662	1689 Feb. 13	5 10 15	32		Westminster
William III.	1650	1689 Feb. 13	13 0 23	52		Westminster
Anne	1665	1702 Mar. 8	12 4 24	49		Westminster
George I.	1660	1714 Aug. 1	12 10 10	67		Hanover
George II.	1683	1727 June 11	33 4 14	77		Westminster
George III.	1738	1760 Oct. 25	Crowned Sept. 22, 1761.			

Above you view the Rise and Fall of Kings,
Whose Fate sometimes a useful Lesson brings.
Well if all Men could profit from the past!
Each know his Duty, each excel the last,
And justly execute his stated Task.

A TABLE of the most Reverend, Right Reverend, and Reverend, the ARCHBISHOPS, BISHOPS and DEANS, exercising Ecclesiastical Jurisdiction, 1793.

BISHOPS.	Sees.	Date.	Succeeded.	DEANS.
Dr. John Moore	<i>Banger</i>	1775	Ewer deceased	
Arch-Bishop	<i>Canterb. A. B.</i>	1783	Cornwallis dec.	Bishop Buller
Dr. Will. Markham	<i>Chester</i>	1771	Keene translat.	
Arch-Bishop	<i>York A. B.</i>	1777	Drummond de.	Dr. J. Fountayne
Dr. Beilby Porteus	<i>Chester</i>	1776	Markham tran.	
	<i>London</i>	1787	Lowth deceas.	Bishop Pretyman
	<i>Landaff</i>	1769	Shipley translat.	
Ho. Dr. S. Barrington	<i>Salisbury</i>	1782	Hume dec.	
	<i>Durham</i>	1791	Thurlow dec.	Bishop Hinchliffe
	<i>Litch & Cov.</i>	1771	Egerton translat.	
Hon. Dr. B. North	<i>Worcester</i>	1774	Johnson deceas.	
	<i>Winchester</i>	1781	Thomas deceas.	Dr. Newton Ogle
Sir W. Ashburnham	<i>Chichester</i>	1754	Mawson translat.	Mr. Combe Miller
Dr. Charles Moss	<i>St. David's</i>	1766	Lowth translat.	
	<i>Bath & Wells</i>	1774	Willes decease	Ld. Fr. Seymour
Dr. John Hinchliffe	<i>Peterborough</i>	1769	Lamb dec.	Dr. Peter Peckard
	<i>St. David's</i>	1774	Moss translat.	
H. Dr. James Yorke	<i>Gloucester</i>	1779	Warburton dec.	
	<i>Ely</i>	1781	Keene deceased	Dr. W. Cooke
Dr. John Thomas	<i>Rocheſter</i>	1774	Pearce dec.	Dr. T. Dampier
Dr. Richard Hurd	<i>Litch. & Cov.</i>	1775	B. North tr.	
	<i>Worcester</i>	1781	B. North tr.	Ho. St. A. St. John
Dr. John Butler	<i>Oxford</i>	1777	Lowth translat.	
	<i>Hereford</i>	1788	Harley deceas.	Dr. N. Wetherell
Dr. John Warren	<i>St. David's</i>	1779	Yorke translat.	
	<i>Banger</i>	1783	Moore translat.	Dr. Tho. Lloyd
Dr. J. Cornwallis	<i>Litch & Cov.</i>	1781	Hurd translat.	Dr. Bapt. Proby
	<i>Bristol</i>	1782	Newton dec.	
Dr. Lewis Bagot	<i>Norwich</i>	1783	Yonge dec.	
	<i>St. Asaph</i>	1790	Hall fax dec.	Mr. W. D. Shipley
Dr. Richard Watſon	<i>Landaff</i>	1782	Barrington tr.	Dr. R. Price, Pr.
Dr. Edward Smalwel	<i>St. David's</i>	1783	Warren translat.	
	<i>Oxford</i>	1788	Butler translat.	Dr. Cyril Jackson
Dr. G. Pretyman	<i>Lincoln</i>	1787	Thurlow tran.	Sir R. Kaye, Bt.
Dr. John Douglas	<i>Carlisle</i>	1787	Law dec.	
	<i>Salisbury</i>	1791	Barrington tra.	Dr. John Ekins
Dr. William Cleaver	<i>Cheſter</i>	1788	Porteus tran.	Dr. G. Cotton
Dr. Samuel Hurſley	<i>St. David's</i>	1788	Smalwell tr.	Mr. Wollaston, P.
Dr. Richard Beadon	<i>Glouceſter</i>	1789	Hallifax tran.	Dr. Joſiah Tucker
Dr. E. V. Vernon	<i>Carlisle</i>	1791	Douglas translat.	Dr. Isaac Milner
Dr. Charles Sutton	<i>Norwich</i>	1792	Bagot tran.	Dr. John Hallam
Dr. Spencer Madan	<i>Bristol</i>	1792	Bagot translat.	Dr. Joſeph Turner
Dr. Wm. Bulſer	<i>Exeter</i>	1792	Rofs dec.	Dr. C. Harward
	<i>Westminster</i>	1768		Bishop Thomas
	<i>Winſter</i>	1788		Bishop Cornwallis
Dr. Claudius Crigan	<i>Sodor & Man</i>	1784	Mason dec.	

IN the course of this year there will happen four eclipses, two of the sun, and two of the moon; and one of each of these will be visible in these parts.

I. February 25, the first is a visible eclipse of the moon.

Beginning of the eclipse 9h 23m 45s. night

The middle - 10 45 15

End of the eclipse 12 6 30

Total duration - 2 42 45

Digits eclipsed 6° 0' on the moon's north limb.

II The sun is eclipsed, but not visible in these parts, on the 12th day of March, in the morning; the conjunction being at 5h. 57m. in the morning, in long. $11^{\circ} 22' 10''$, the moon's latitude being $39' 40''$ south. The sun will be centrally eclipsed on the meridian, or at noon, in long. 38° east, and latitude $46^{\circ} 30'$ south. So that in the great Pacific Ocean this will be a central and total eclipse; though invisible in Europe, on account of the moon's south latitude.

III. August 21 the moon is eclipsed, but invisible here.

Beginning of the eclipse 1h 28m 40s. afternoon

The middle - 2 52 40

End of the eclipse - 4 16 40

Total duration - 2 48 0

Digits eclipsed $8^{\circ} 41'$ on the moon's south limb.

IV. September 5 the sun is eclipsed, and visible here, in the morning.

Beginning of the eclipse 9h 37m 0s. morning

The middle - 11 8 45

End of the eclipse - 12 44 15

Digits eclipsed $9^{\circ} 28'$ on the sun's north limb; and the eclipse commences at $29^{\circ} 30'$ from the sun's vertex on the right hand. But this eclipse will be considerably larger all the way more and more north from London or Greenwich, inasmuch as to become annular in the north parts of Scotland, as well as in all the northern parts of the earth, from Hudson's Bay, and thence eastward through the northern parts of Europe and Asia.

Obliquity of the Ecliptic.

1793.

Equation of Equinoctial Points.

23° 27' 48". 3	-	January	1,	-	3". 6
23 27 48. 4	-	April	1,	-	5. 0
23 27 48. 6	-	July	1,	-	6. 5
23 27 48. 7	-	October	1,	-	7. 9
23 27 48. 9	-	December	1,	-	9. 2

The LUNATIONS.

Last quarter the 5th day, at 58 minutes past 12 noon.
 New Moon the 12th day, at 59 minutes past 8 morning.
 First quarter the 19th day, at 29 minutes past 2 morning.
 Full Moon the 27th day, at 34 minutes past 4 morning.

M	Sundays & other D remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ fouth	Clock bef. ☉	
1	Circumcision	8 4	3 56	22 s 57	10 n 58	8 a 30	2 m 46	4 22	
2		8 4	3 5	22 52	7 40	9 32	3 30	4 50	
3		8 3	3 57	22 45	4 2	10 35	4 13	5 17	
4		8 2	3 58	22 39	0 10	11 41	4 56	5 45	
5	Old Christ. Day	8 2	3 5	22 32	3 s 47	morn.	5 41	6 11	
6	S. a. Car. Epiph.	Tw. day	3 59	22 25	7 40	0 48	6 27	6 38	
7	Plow Monday	8 0	4 0	22 17	11 19	1 57	7 15	7 3	
8	Lucian	7 59	4 1	22 9	14 30	3 8	8 7	7 29	
9		7 58	4 2	22 0	16 55	4 21	9 3	7 54	
10		7 57	4 3	21 51	18 18	5 31	10 2	8 18	
11		7 56	4 4	21 41	18 26	6 35	11 3	8 41	
12	O. N. Year's d.	7 55	4 5	21 31	17 16	☾ sets	0 a 5	9 4	
13	S. aft. Epiph.	Hilary	Ca. T. h	21 21	14 51	6 a 1	1 6	9 27	
14	Oxf. Term beg.	7 52	4 8	21 10	11 26	7 21	2 4	9 48	
15		7 51	4 9	20 59	7 22	8 40	2 59	10 10	
16		7 50	4 10	20 47	2 58	9 57	3 52	10 30	
17	Old Twe. Day	7 49	4 11	20 35	1 n 28	11 10	4 42	10 49	
18	Q. Char. b. d. k.	Prisca	4 13	20 23	5 40	morn.	5 30	11 8	
19		7 46	4 14	20 10	9 28	0 20	6 18	11 26	
20	S. af. Epiph.	Fabian	4 15	19 57	12 44	1 28	7 6	11 43	
21	Agnes	7 43	4 17	19 44	15 20	2 33	7 53	12 0	
22	Vincent	7 42	4 18	19 30	17 12	3 33	8 41	12 16	
23	Hil. Term beg.	7 40	4 20	19 15	18 15	4 30	9 29	12 30	
24		7 39	4 21	19 1	18 29	5 23	10 17	12 44	
25	Con. of St. Paul	7 37	4 23	18 46	17 55	6 7	11 4	12 58	
26		7 36	4 24	18 31	16 33	6 46	11 50	13 10	
27	Septu. S. Pr. Au.	7 34	4 26	18 15	14 20	☾ rises	morn	13 22	
28	[Fr. b.]	7 33	4 27	17 59	11 48	6 a 13	0 35	13 32	
29		7 31	4 29	17 43	8 38	7 14	1 20	13 42	
30	K. Cha. I. mar.	7 29	4 31	17 20	5 6	8 17	2 3	13 51	
31		7 28	4 32	17 9	1 10	9 22	2 46	14 0	
Days	Day ncreaf.	Length of Day.	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♂	h sets.
1	0 8	7 52	18 18	16 m 33	3 51	11 39	0 55	11 30	1 m 31
7	0 16	8 0	1 30	17 0	7 30	17 46	20 30	15 59	1 5
13	0 28	8 12	1 43	17 28	11 28	23 53	0 8	14 57	0 39
19	0 44	8 28	1 56	17 56	15 16	0 0	9 41	8 54	0 14
25	1 2	8 46	2 9	18 24	19 3	6 6	19 18	29 15	11 249

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January.

9

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	5 59	6 1	2 5	18 Ω 34	2 s 33	0 n 56	1 s 9	1 s 48	2 n 40
7	5 56	6 4	2 4	18 15	2 31	0 5	1 7	1 40	3 20
13	5 52	6 8	2 2	17 56	2 29	0 57	1 5	1 30	2 49
19	5 46	6 14	2 0	17 37	2 28	0 58	1 2	1 16	1 52
25	5 39	6 21	1 58	17 18	2 26	0 58	1 0	0 59	0 51
Days	☉'s longitude		☽'s long.	☽'s latitude	h's long.	u's long.	δ's long.	♀'s long.	♂'s long.
1	11 39	22	26 Ω 43	1 s 46	25 Υ 22	24 Π 15	12 $\sim$ 28	17 $\sim$ 18	11 $\sim$ 34
2	12 40	32	8 Ω 35	0 45	25 22	24 26	13 15	19 1	6 20
3	13 41	43	20 35	0 n 19	25 23	24 36	14 20	14 9	2
4	14 42	53	2 47	1 23	25 24	24 47	14 50	21 27	7 49
5	15 44	4	15 16	2 25	25 25	24 57	15 37	22 40	6 41
F	16 45	15	28 7	3 22	25 26	25 8	16 24	23 53	5 40
7	17 46	26	11 Ω 26	4 9	25 27	25 18	17 11	25 5	4 48
8	18 47	37	25 14	4 44	25 28	25 28	17 58	26 18	4 6
9	19 48	4	9 $\uparrow$ 32	5 3	25 30	25 39	18 45	27 31	3 34
10	20 49	58	24 17	5 3	25 31	25 49	19 33	28 43	3 12
11	21 51	8	9 Ω 23	4 42	25 33	25 59	20 20	29 56	3 0
12	22 52	18	24 40	4 0	25 35	26 9	21 7	1 $\times$ 9	2 D 56
F	23 53	27	9 $\sim$ 58	3 2	25 37	26 19	21 55	2 21	2 59
14	24 54	36	25 4	1 51	25 39	26 29	22 42	3 34	3 10
15	25 55	44	9 $\times$ 51	0 34	25 41	26 38	23 29	4 46	3 29
16	26 56	51	24 14	0 s 44	25 43	26 48	24 17	5 58	3 57
17	27 57	57	8 Υ 9	1 56	25 45	26 57	25 4	7 10	4 30
18	28 59	2	21 39	3 0	25 47	27 7	25 52	8 22	5 7
19	0 0	5	4 Ω 45	3 52	25 50	27 16	26 39	9 34	5 49
F	1 1	8	17 31	4 32	25 52	27 25	27 26	10 46	6 36
21	2 2	10	30 0	4 57	25 55	27 34	28 13	11 57	7 26
22	3 3	10	12 Π 15	5 8	25 58	27 42	29 1	13 9	8 20
23	4 4	9	24 22	5 6	26 1	27 51	29 48	14 20	9 18
24	5 5	7	6 Ω 21	4 49	26 4	28 0	0 $\times$ 35	15 32	10 18
25	6 6	4	18 15	4 21	26 7	28 8	1 23	16 43	11 21
26	7 7	0	0 Ω 6	3 41	26 10	28 16	2 10	17 54	12 26
F	8 7	54	11 56	2 52	26 14	28 24	2 57	19 5	13 34
28	9 8	47	23 46	1 55	26 17	28 32	3 44	20 16	14 45
29	10 9	39	5 Ω 39	0 52	26 21	28 40	4 32	21 27	15 57
30	11 10	31	17 37	0 n 13	26 24	28 48	5 19	22 38	17 11
31	12 11	22	29 42	1 18	26 28	28 56	6 6	23 49	18 26
Days	☿'s rises	♂'s sets	♀'s sets	♂'s rises	h's declin.	u's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	4 m 11	6 a 37	7 a 5	7 m 16	7 n 27	17 s 57	18 s 11	17 s 14	20 s 18
5	3 50	6 38	7 21	6 42	7 30	18 12	16 46	14 45	20 3
13	3 29	6 40	7 38	6 16	7 35	18 26	15 14	12 32	20 37
19	3 9	6 41	7 54	6 10	7 42	18 38	13 37	9 10	21 29
25	2 49	6 43	8 11	6 14	7 50	18 49	11 56	6 9	22 8

10 February hath xxviii Days. White.

The LUNATIONS.

Last quarter the 4th day, at 38 minutes past 3 morning.
 New Moon the 10th day, at 26 minutes past 7 afternoon.
 First quarter the 17th day, at 10 minutes past 6 afternoon.
 Full Moon the 25th day, at 36 minutes past 10 night.

M	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ fourth	Clock bef. ☉	
1		7 26	4 34	16 s 52	2 s 34	10 a 29	3 n 30	14 7	
2	Purif. Candles.	7 24	4 36	16 35	6 25	11 36	4 16	14 14	
3	Sexagesima Sun.	7 23	4 37	16 17	10 4	morn	5 2	14 20	
4	[Blaise]	7 21	4 39	15 59	13 19	0 44	5 51	14 25	
5	Agatha	7 19	4 41	15 41	15 57	1 53	6 43	14 29	
6		7 17	4 43	15 22	17 44	3 3	7 37	14 33	
7		7 15	4 45	15 3	18 26	4 6	8 36	14 36	
8		7 14	4 46	14 44	17 55	5 6	9 36	14 38	
9		7 12	4 48	14 25	16 2	5 57	10 37	14 39	
10	Quinq. Shro. S.	7 10	4 50	14 5	13 11	(sets)	11 30	14 39	
11		7 8	4 52	13 45	9 22	6 a 15	0 a 37	14 39	
12	Shrove Tuesday	T. ends	4 54	13 25	5 0	7 25	1 33	14 38	
13	Ash Wednesday	O Ca. D	4 56	13 5	0 26	8 43	2 26	14 36	
14	Valentine	7 3	4 57	12 45	4 n 1	9 58	3 18	14 34	
15	Cam. T. div. n.	7 1	4 50	12 24	8 6	11 10	4 8	14 30	
16		6 59	5 1	12 3	11 39	morn	4 57	14 26	
17	1 Sun. in Lent	6 57	5 3	11 42	14 31	0 18	5 46	14 21	
18		6 55	5 5	11 21	16 38	1 22	6 35	14 15	
19		6 53	5 7	10 59	17 56	2 22	7 24	14 9	
20	Ember Week	6 51	5 9	10 38	18 25	3 15	8 12	14 2	
21		6 49	5 11	10 16	18 3	4 3	8 59	13 55	
22		6 47	5 13	9 54	16 56	4 44	9 46	13 46	
23		6 45	5 15	9 32	15 4	5 20	10 32	13 37	
24	2 S. in L. St. Mat.	6 43	5 17	9 10	12 33	5 53	11 17	13 28	
25	[Chla. Pr. A. F. b.]	6 41	5 19	8 48	9 30	☽ rises morn	13 18		
26		6 39	5 21	8 25	6 3	6 a 10	0 1	13 7	
27		6 38	5 22	8 3	2 18	7 14	0 45	12 56	
28		6 36	5 24	7 40	1 s 36	8 20	1 30	12 44	
Days	Day increas.	Length of day	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♂	h sets
1	1 24	9 8	2 8 24	18 m 56	23 27	13 12	0 13 2	20 m 15	11 a 22
7	1 4	9 30	2 37 19	24 27	13 19	17 10	12 7 1	11 1	
13	2 8	9 52	2 50 19	52 07	56 25	21 19	52 23	31 10	40
19	2 30	10 14	3 2 20	20 4	40 17	24 29	34 10	30 10	20
25	2 54	10 38	3 15 20	48 8	22 7	25 9	26 16	28 45	1

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February.

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Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	5 30	6 32	1 56	16m55	23 24	0 n 59	0 56	0 35	0 s 13
7	5 22	6 38	1 53	10 36	2 23	0 59	0 53	0 12	0 58
13	5 13	6 47	1 51	16 17	2 21	1 00	0 50	0 14	1 34
19	5 2	6 59	1 52	15 5	2 20	1 1	0 47	0 41	1 58
25	4 50	7 10	1 52	15 39	2 18	1 1	0 43	1 10	2 8

Days	☉'s longitude	D's long.	D's latitude	h's long.	u's long.	δ's long.	♀'s long.	♂'s long.
1	13 12 12	11 59	2 n 21	26 32	2 m 4	6 53	24 55	19 43
2	14 13 1	24 30	3 19	26 36	29 11	7 40	26 9	21 0
F	15 13 49	7 m 19	4 8	26 40	29 12	8 27	27 19	22 19
4	16 14 36	20 32	4 45	26 44	29 25	9 14	28 25	23 41
5	17 15 22	4 19	5 8	26 48	29 32	10 1	29 39	25 13
6	18 16 7	18 14	5 14	26 52	29 39	10 48	0 49	26 26
7	19 16 51	2 44	5 0	26 56	29 46	11 35	1 59	27 51
8	20 17 34	17 36	4 26	27 1	29 52	12 22	3 8	29 16
9	21 18 15	2 43	3 32	27 5	29 59	13 9	4 17	0 42
F	22 18 55	17 56	2 24	27 10	0 1	13 56	5 26	2 10
11	23 19 34	1 5	1 6	27 14	0 11	14 43	6 35	3 39
12	24 20 11	18 0	0 s 16	27 19	0 17	15 30	7 44	5 8
13	25 20 47	2 34	1 35	27 24	0 23	16 17	8 53	6 38
14	26 21 21	16 43	2 40	27 29	0 28	17 4	10 1	8 9
15	27 21 53	0 24	3 45	27 34	0 34	17 51	11 10	9 41
16	28 22 23	13 39	4 30	27 39	0 39	18 38	12 18	11 15
F	29 22 50	26 29	5 0	27 44	0 44	19 25	13 26	12 49
18	0 23 16	9 11	5 15	27 49	0 49	20 12	14 34	14 24
19	1 23 40	21 14	5 15	27 55	0 54	20 58	15 41	16 0
20	2 24 2	3 16	5 1	28 0	0 58	21 45	16 47	17 37
21	3 24 22	15 10	4 34	28 6	1 3	22 31	17 56	19 15
22	4 24 40	27 0	3 56	28 11	1 7	23 18	19 3	20 54
23	5 24 56	8 49	3 7	28 17	1 12	24 4	20 10	22 34
F	6 25 10	20 39	2 11	28 22	1 16	24 51	21 17	24 16
25	7 25 22	2 m 34	1 8	28 28	1 20	25 37	22 23	25 57
26	8 25 32	14 35	0 2	28 33	1 24	26 24	23 29	27 40
27	9 25 40	26 44	1 n 5	28 39	1 27	27 10	24 35	29 24
28	10 25 47	9 2	2 10	28 45	1 30	27 57	25 40	31 9

Days	u rises	δ sets	♀ sets	♂ rises	h's declin.	u's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	2 m 26	6 a 46	8 a 31	6 m 23	8 n 0	19 s 1	9 52	2 32	22 s 14
7	2 5	6 49	8 47	6 31	8 10	19 9	3 3	0 36	21 34
13	1 44	6 57	9 4	6 36	8 22	19 17	6 11	3 44	20 8
19	1 24	6 56	9 21	6 37	8 34	19 22	4 18	6 49	17 55
25	1 4	7 0	9 32	6 36	8 47	19 26	2 24	0 48	14 54

The LUNATIONS.

Last quarter the 5th day, at 38 minutes past 2 afternoon.
 New Moon the 12th day, at 57 minutes past 5 morning.
 First quarter the 19th day, at 37 minutes past 11 morning.
 Full Moon the 27th day, at 34 minutes past 3 afternoon.

M	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	Drises & sets	☾ South	Clock bef. ☉	
1	David	6 34	5 26	7 s 17	5 s 28	9 a 27	2 m 15	12 32	
2	Chad	6 32	5 28	6 54	9 10	10 36	3 0	12 19	
3	Sund. in Lent	6 30	5 3	6 31	12 28	11 45	3 49	12 6	
4		6 28	5 32	6 8	15 15	morn	4 4	11 52	
5		6 26	5 34	5 45	17 15	0 52	5 33	11 38	
6		6 24	5 36	5 22	18 17	1 58	6 29	11 24	
7	Perpetua	6 22	5 38	4 58	18 13	2 58	7 27	11 9	
8		6 20	5 40	4 35	16 5	3 50	8 25	10 54	
9		6 18	5 42	4 11	14 34	4 35	9 23	10 38	
10	4 or Midl. Sund.	6 16	5 44	3 48	11 11	5 14	10 22	10 22	
11		6 14	5 46	3 24	7 5	5 50	11 19	10 6	
12	Gregory	6 12	5 48	3 1	2 34	Drises	0 a 15	9 50	
13		6 10	5 50	2 37	2 n 2	7 a 36	1 8	9 33	
14		6 8	5 52	2 13	6 24	8 49	2 1	9 16	
15		6 6	5 54	1 50	10 17	9 59	2 52	8 59	
16		6 4	5 56	1 26	13 31	11 7	3 43	8 41	
17	5 Sund. in Lent	St. Pat	5 58	1 2	15 59	morn	4 33	8 23	
18	Edw. K. W. S.	6 0	6 0	0 39	17 36	0 14	5 23	8 5	
19		5 58	6 2	0 15	18 21	1 13	6 12	7 47	
20		5 56	6 4	0 n 9	18 15	2 4	7 0	7 29	
21	Benedict	5 54	6 6	0 32	17 21	2 48	7 47	7 11	
22	Cam. T. ends	5 52	6 8	0 56	15 41	3 25	8 34	6 52	
23	Oxf. T. ends	5 50	6 10	1 20	13 22	4 0	9 20	6 33	
24	Palm Sunday	5 48	6 12	1 43	10 28	4 30	10 5	6 15	
25	Ann. or Lady D.	5 46	6 14	2 7	7 6	4 58	10 42	5 56	
26		5 44	6 16	2 30	3 24	5 21	11 33	5 37	
27		5 42	6 18	2 54	0 s 31	Drises	morn	5 19	
28	Maundy Thurs.	5 40	6 20	3 17	4 28	7 a 24	0 19	5 0	
29	Good Friday	5 38	6 22	3 40	8 17	8 34	1 6	4 41	
30		5 36	6 24	4 4	11 47	9 44	1 54	4 23	
31	Easter Day	5 34	6 26	4 27	14 43	10 52	2 44	4 4	
Days	Day increas.	Length of day	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♀	h sets.
1	3 8	10 52	3 8 24	2 11 6	10 49	11 22 6	15 26 49	12 22 5	9 a 47
7	3 32	11 16	3 37	21 34	14 28	17 26 25	29 42	4 28	9 28
13	3 50	11 40	3 50	22 2	18 5	23 25 58	14 1 39	9 10	
19	4 20	12 4	4 22	22 30	21 41	29 22 14	59 3 8	43 8	52
25	4 44	12 28	4 15	22 58	25 15	5 10 24	45 10 11	22 8	35

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March.

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Day	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	U's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	4 43	7 18	1 52	51 26	2 18	1 2	0 41	1 30	2 8 7
7	4 30	7 31	1 53	15 7	2 17	1 3	0 37	2 1	1 51
13	4 17	7 44	1 54	4 48	2 16	1 3	0 33	2 31	1 17
19	4 4	7 57	1 55	4 29	2 15	1 4	0 30	3 2	0 22
25	3 50	8 11	1 57	14 10	2 14	1 4	0 26	3 31	0 46
Day	☉'s longitude		D's long.	D's latitude	h's long.	U's long.	δ's long.	♀'s long.	♂'s long.
1	X 11	25 53	21 31	3 n 10	28 51	1 33	28 43	26 45	2 55
2	12	25 56	4 14	4 128	57	1 36	29 30	27 50	4 42
F	13	25 58	17 12	4 41	29 3	1 38	0 16	28 55	6 30
4	14	25 58	0 28	5 8	29 9	1 41	1 2	29 5	8 20
5	15	25 57	14 2	5 18	29 15	1 43	1 48	1 8 3	10 11
6	16	25 54	27 55	5 10	29 21	1 46	2 34	2 7	12 2
7	17	25 50	12 8	4 43	29 28	1 48	3 20	3 10	13 54
8	18	25 44	26 38	3 58	29 34	1 50	4 6	4 13	15 47
9	19	25 36	11 22	2 56	29 41	1 51	4 52	5 16	17 42
F	20	25 27	26 14	1 43	29 47	1 53	5 38	6 18	19 39
11	21	25 16	11 7	0 22	29 54	1 54	6 24	7 20	21 36
12	22	25 3	25 52	1 0	0 8	1 55	7 10	8 22	23 34
13	23	24 48	10 24	2 16	0 8	1 56	7 56	9 23	25 32
14	24	24 30	24 35	3 23	0 14	1 57	8 42	10 24	27 31
15	25	24 10	8 22	4 15	0 21	1 57	0 28	11 24	29 31
16	26	23 48	21 44	4 52	0 27	1 58	10 14	12 24	1 37
F	27	23 24	4 11	5 12	0 34	1 58	11 0	13 24	3 31
18	28	22 58	17 17	5 17	0 41	1 58	11 46	14 24	5 31
19	29	22 29	29 33	5 7	0 48	1 57	12 31	15 24	7 32
20	Y 0	21 58	11 36	4 43	0 55	1 57	13 17	16 23	9 32
21	1	21 24	23 30	4 8	1 2	1 57	14 2	17 22	11 31
22	2	20 48	5 19	3 22	1 0	1 56	14 4	18 20	13 29
23	3	20 10	17 8	2 28	1 10	1 54	15 33	19 17	15 25
F	4	19 29	29 1	1 27	1 23	1 53	16 19	20 11	17 19
25	5	18 46	11 1	0 22	1 31	1 52	17 4	21 7	19 11
26	6	18 1	23 12	0 n 4	1 38	1 50	17 50	22 2	21 0
27	7	17 14	5 34	1 51	1 45	1 48	18 35	22 56	22 46
28	8	16 25	18 10	2 53	1 52	1 46	19 20	23 50	24 29
29	9	15 34	1 0	3 47	1 59	1 44	20 6	24 43	26 7
30	10	14 41	14 3	4 30	2 6	1 42	20 51	25 36	27 41
F	11	13 46	27 20	4 59	2 14	1 40	21 36	26 28	29 11
Day	☿'s rises	♂'s sets	♀'s sets	♂'s rises	h's declin.	U's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	0 m 50	7 a 3	9 a 49	6 m 35	8 n 56	19 29	1 8	11 n 43	12 8 25
7	0 28	7 7	10 5	6 30	9 10	19 31	0 n 46	14 28	8 3
13	0 6	7 11	10 22	6 21	9 25	19 32	2 39	17 1	2 57
19	11 43	7 15	10 38	6 14	9 40	19 32	4 30	19 21	2 n 39
25	11 20	7 20	10 54	6 5	9 55	19 30	6 15	21 26	8 14

The LUNATIONS.

Last quarter the 3d day, at 32 minutes past 10 night.

New Moon the 10th day, at 35 minutes past 4 afternoon.

First quarter the 18th day, at 20 minutes past 6 morning.

Full Moon the 26th day, at 19 minutes past 5 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ South	Clock bef. ☉	
1	Easter Monday	5 32	6 28	4 n 50	16 s 56	11 a 59	3 m 37	3 46	
2	Easter Tuesday	5 30	6 30	5 13	18 12	morn	4 32	3 28	
3	Richard Bp. Ch.	5 28	6 32	5 36	18 25	1 0	5 29	3 9	
4	St. Ambrose	5 26	6 34	5 59	17 30	1 55	6 26	2 52	
5	Old Lady Day	5 24	6 36	6 21	15 29	2 42	7 23	2 34	
6		5 22	6 38	6 44	12 30	3 22	8 19	2 16	
7	Low Sunday	5 20	6 40	7 7	8 43	3 56	9 15	1 59	
8		5 18	6 42	7 29	4 25	4 28	10 9	1 42	
9		5 17	6 43	7 51	on 7	4 57	11 2	1 25	
10	Ox. & Ca. T. beg.	5 15	6 45	8 13	4 35	(sets	11 54	1 9	
11		5 13	6 47	8 35	8 44	7 a 50	oa 47	0 53	
12		5 11	6 49	8 57	12 20	9 3	1 39	0 37	
13		5 9	6 51	9 19	15 11	10 8	2 30	0 21	
14	2 S. aft. Easter	5 7	6 53	9 40	17 12	11 9	3 21	0 6	
15		5 5	6 55	10 2	18 18	morn	4 12	oaf. 9	
16		5 3	6 57	10 23	18 31	0 5	5 1	0 24	
17	Easter T. beg.	5 1	6 59	10 44	17 52	0 51	5 49	0 38	
18		4 59	7 1	11 5	16 26	1 32	6 36	0 52	
19	Alphege	4 57	7 3	11 26	14 18	2 8	7 22	1 5	
20		4 56	7 4	11 46	11 35	2 40	8 7	1 18	
21	3 S. af. Easter	4 54	7 6	12 6	8 21	3 8	8 51	1 31	
22		4 52	7 8	12 27	4 44	3 32	9 35	1 43	
23	St. George	4 50	7 10	12 47	0 51	3 55	10 20	1 55	
24	[M. b.	4 48	7 12	13 6	3 s 9	4 20	11 7	2 6	
25	St. Mark. Prs.	4 46	7 14	13 26	7 7	4 46	11 55	2 17	
26		4 45	7 15	13 45	10 49	(rises	morn	2 28	
27		4 43	7 17	14 4	14 2	8 a 46	0 45	2 37	
28	4 Sun. af. East.	4 41	7 19	14 23	16 33	9 55	1 38	2 47	
29		4 39	7 21	14 41	18 8	11 1	2 33	2 55	
30		4 37	7 23	15 0	18 38	11 58	3 30	3 4	
Days	Day increas.	Length of day	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♂	h sets
1	5 12	12 56	48 30	23 m 31	29 24	12 13	6 m 8	23 43	8 a 15
7	5 36	13 20	4 43	23 59	28 54	18 7	15 52	26 24	7 57
13	6 58	13 42	4 56	24 27	6 22	23 59	25 36	23 31	7 39
19	6 22	14 6	5 9	24 55	9 48	29 51	5 19	16 5	7 21
25	6 44	14 28	5 22	25 23	13 11	5 m 41	15 0	5 m 34	7 4

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April.

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Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	♂'s latitude	♀'s latitude	♂'s latitude
1	3 33	8 28	2 0	13 24	2 5 13	1 n 5	0 s 21	4 n 2	2 n 6
7	3 18	8 43	2 3	13 29	2 13	1 5	0 17	4 25	2 52
13	3 2	8 56	2 6	13 10	2 12	1 6	0 13	4 44	3 1
19	2 45	9 16	2 13	12 51	2 12	1 6	0 10	4 57	2 22
25	2 26	9 35	2 21	12 32	2 12	1 6	0 6	5 1	0 59

Days	☉'s longitude	☽'s long.	☽'s latitude	h's long.	u's long.	♂'s long.	♀'s long.	♂'s long.
1	12 12 49	10 1 51	5 n 13	2 8 22	1 1 38	22 21	27 8 21	0 8 31
2	13 11 50	24 33	5 9	2 29	1 35 23	6 18	13 1	59
3	14 10 50	8 27	4 47	2 36	1 32 23	51 29	4 3	13
4	15 9 48	22 32	4 8	2 44	1 29 24	36 29	54 4	18
5	16 8 45	6 45	3 13	2 51	1 25 25	21 0	11 42	5 30

6	17 7 40	21 6	2 6	2 58	1 22 26	6 1	28 6	17
F 7	18 6 33	5 31	0 50	3 6	1 18 26	51 2	13 7	5
8	19 5 24	19 58	0 29	3 13	1 14 27	36 2	58 7	53
9	20 4 14	4 20	1 45	3 21	1 10 28	20 3	42 8	30
10	21 3 2	18 33	2 54	3 29	1 6 29	5 4	26 9	1

11	22 1 48	2 32	3 51	3 36	1 2 29	49 5	9 9	25
12	23 0 32	16 13	4 34	3 44	0 58 0	8 34 5	51 9	44
13	23 59 13	29 33	5 0	3 52	0 53 1	18 6	3 9	57
F 14	24 57 52	12 11 31	5 10	3 59	0 48 2	3 7	15 9	4
15	25 56 29	25 8	5 6	4 7	0 43 2	47 7	52 9	R 4

16	26 55 4	7 27	4 45	4 15	0 38 3	32 8	29 9	57
17	27 53 37	19 32	4 15	4 22	0 33 4	16 9	5 9	45
18	28 52 8	1 26	3 30	4 30	0 28 5	0 9	40 9	29
19	29 50 37	13 16	2 39	4 38	0 22 5	44 10	13 9	8
20	30 49 3	25 6	1 41	4 45	0 16 6	29 10	44 8	42

F 21	1 47 27	7 12 1	0 38	4 53	0 10 7	13 11	14 8	13
22	2 45 49	19 6	0 n 27	5 1	0 4 7	57 11	43 7	39
23	3 44 9	1 24	1 32	5 8	29 m 58	8 41	12 11	7 3
24	4 42 27	14 0	2 34	5 16	29 52	9 25	12 37	6 25
25	5 40 43	26 53	3 29	5 24	29 46	10 9	13 1	5 46

26	6 38 57	10 n 4	4 15	5 31	29 39	10 53	13 23	5 6
27	7 37 9	23 33	4 47	5 39	29 33	11 36	13 43	4 27
F 28	8 35 20	7 16	5 4	5 46	29 26	12 20	14 1	3 49
29	9 33 29	21 10	5 3	5 54	29 19	13 3	14 18	3 12
30	10 31 37	5 12	4 44	6 2	29 12	13 47	14 32	2 37

Days	u's rises	♂'s sets	♀'s sets	♂'s sets	h's declin.	u's declin.	♂'s declin.	♀'s declin.	♂'s declin.
1	10 2 53	7 2 24	11 2 8	8 2 21	10 n 13	19 s 27	8 n 23	23 n 31	13 n 39
7	10 29	7 28	11 11	8 41	10 29	19 23	10 52	24 57	16 36
13	10 4	7 32	11 13	8 36	10 45	19 17	11 44	26 5	17 41
19	9 39	7 36	11 16	8 6	11 0	19 10	13 18	26 54	16 48
25	9 14	7 40	11 18	7 12	11 16	19 3	14 47	27 22	14 23

The LUNATIONS.

Last quarter the 3d day, at 25 minutes past 4 morning.

New Moon the 10th day, at 31 minutes past 3 morning.

First quarter the 17th day, at 53 minutes past 12 night.

Full Moon the 25th day, at 52 minutes past 3 afternoon.

M	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ South	Clock aft. ☉	
1	St. Phil. and Jas.	4 36	7 24	15 n 18	18 s 0	morn	4 m 27	3' 11"	
2		4 34	7 26	15 36	16 14	0 49	5 25	3 18	
3	Inven. of Cro's	4 32	7 28	15 53	13 29	1 29	6 21	3 25	
4		4 31	7 29	16 11	9 56	2 5	7 15	3 31	
5	For Rogat. Su.	4 29	7 31	16 28	5 50	2 37	8 8	3 36	
6	John Ev. a. P. L.	4 27	7 33	16 44	1 25	3 0	9 0	3 41	
7		4 25	7 35	17 1	3 n 2	3 32	9 51	3 45	
8		4 24	7 36	17 17	7 17	4 0	10 42	3 49	
9	Ascen. H. Thu.	4 22	7 38	17 33	11 6	4 28	11 32	3 52	
10		4 21	7 39	17 49	14 16	☾ sets	0 a 23	3 55	
11		4 19	7 41	18 4	16 39	9 a 6	1 15	3 57	
12	Sun. af. Ascen.	O. M. D	7 42	18 19	18 9	9 59	2 6	3 58	
13	Easter T. ends	4 16	7 44	18 34	18 43	10 49	2 56	3 59	
14		4 14	7 46	18 48	18 23	11 34	3 45	3 59	
15		4 13	7 47	19 2	17 13	morn	4 33	3 58	
16	Oxf. Term e.	4 12	7 48	19 16	15 19	0 12	5 19	3 58	
17		4 10	7 50	19 30	12 46	0 44	6 4	3 56	
18		4 9	7 51	19 43	9 42	1 12	6 48	3 54	
19	Wh. S. Q. Ch. b.	Dunst.	7 53	19 56	6 13	1 37	7 31	3 52	
20	Whit Monday	4 6	7 54	20 8	2 25	2 1	8 15	3 49	
21	Whit Tuesday	4 5	7 55	20 20	1 s 34	2 25	9 0	3 45	
22	E. W. Ps. El. b.	4 3	7 57	20 32	5 34	2 49	9 47	3 41	
23	[C. T. di. n.]	4 2	7 58	20 43	9 26	3 14	10 36	3 36	
24		4 1	7 59	20 54	12 56	3 44	11 28	3 31	
25		4 0	8 0	21 5	15 49	☾ rises	morn	3 26	
26	Trinity Sunday	Augui.	8 2	21 15	17 50	8 a 48	0 23	3 20	
27	Venerable Bede	3 57	8 3	21 25	13 45	9 51	1 20	3 13	
28		3 56	8 4	21 35	18 28	10 45	2 19	3 6	
29	K. Cha. a. rest.	O. T. b.	8 5	21 44	16 59	11 31	3 18	2 58	
30	Corpus Christi	3 54	8 6	21 53	14 25	morn	4 16	2 50	
31	Trin. T. begin	3 53	8 7	22 2	11 1	0 0	5 12	2 43	
Days	Day increas.	Length of day	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♀	h rises
1	7 4	14 48	5 8 35	25 m 50	16 8 33	11 m 30	24 40	23 m 9	4 m 32
7	7 26	15 10	5 48	26 18	19 54	17 18	4 m 19	9 f 49	4 10
13	7 44	15 28	6 1 26	26 46	23 11 23	5 13	55 26	21 3	4 8
19	8 9	15 46	6 14 27	27 14	26 21 28	52 23	30 13	29 3	26
25	8 16	16 0	6 26 27	27 42	29 40	4 f 37	3 f 4	2 m 3	3 4

The LUNATIONS.

Last quarter the 1st day, at 33 minutes past 9 morning.

New Moon the 8th day, at 17 minutes past 3 afternoon.

First quarter the 16th day, at 0 minutes past 6 afternoon.

Full Moon the 23d day, at 0 minutes past 12 night.

Last quarter the 30th day, at 14 minutes past 3 afternoon.

M	Sundays & other	☉	☉	☉'s	D's	D rises	D	Clock
D	remark. days.	rises	sets	declin.	declin.	& sets	South	aft. ☉
1	Nicomede.	3 52 8	8 12 22	10 7 0	om 43	6 m 6	2 31	
2	S. Afr. Trin.	3 51 8	9 22 17	2 39	1 10	6 56	2 24	
3	K. Geo. 3 boys	3 51 8	9 22 25	1 n 47	1 36	7 46	2 14	
4	Fr. Mr. Aug. b.	3 50 8	10 22 32	6 4	3 3	8 36	2 4	
5	Bonita.	8 11 22	38 9 59	2 39	9 25	7 54		
6		3 48 8	12 22 44	13 21	3 0	10 16	1 43	
7		3 48 8	12 22 50	16 0	3 33	11 5	1 32	
8	S. Afr. Trin.	3 47 8	13 22 55	17 49	D sets	17 55	1 20	
9		3 46 8	14 23 0	18 44	8 a 40	0 a 46	1 9	
10		3 4 8	14 23 5	18 44	9 27	1 35	0 57	
11	St. Barnabas	3 45 8	15 23 9	17 52	10 7	2 23	0 49	
12		3 45 8	15 23 13	16 12	10 42	3 10	0 32	
13		3 44 8	16 23 16	13 52	11 13	3 56	0 20	
14		3 44 8	16 23 19	10 58	11 38	4 40	0 7	
15		3 44 8	16 23 21	7 38	morn	5 23	0 def. 5	
16	3 S. Afr. Trin.	3 43 8	17 23 24	3 57	0 3	6 5	0 18	
17	St. Alban	3 43 8	17 23 25	0 4	0 24	6 48	0 31	
18		3 43 8	17 23 26	3 54	0 47	7 33	0 44	
19	Trin. T. ends	3 43 8	17 23 27	7 49	1 11	8 20	0 57	
20	Tr. Ed. KWS	3 43 8	17 23 28	11 29	1 37	9 10	1 10	
21	Longest d. y	3 43 8	17 23 28	14 40	2 8	10 3	1 23	
22	4 S. Afr. Trin.	3 43 8	17 23 27	17 7	2 45	11 0	1 35	
23	Nat. J. Bap.	3 43 8	17 23 27	18 33	D rises	11 59	1 48	
24		Midf.	8 17 23	25 18	47 8 a 32	morn	2 1	
25		3 43 8	17 23 24	17 45	9 22	1 0	2 13	
26		3 44 8	16 23 22	15 30	10 13	2 0	2 26	
27		3 44 8	16 23 19	12 15	10 39	2 58	2 38	
28		3 44 8	16 23 16	8 17	11 0	3 54	2 50	
29	St. Peter	3 45 8	15 23 13	3 55	11 37	4 47	3 2	
30	5 S. Afr. Trin.	3 45 8	15 23 9	0 n 35	morn	5 39	3 14	
M	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	h
D	increaf.	of day	long. ♀	long. ♂	long. ♀	long. ♂	long. ♀	rises
1	8 32	16 16	6 8 41	28 11 15	3 12 24	11 19 14	11 26 50	2 m 37
7	8 40	16 24	6 54 28	43 6	33 17	4 23 42	22 11	2 13
13	8 48	16 32	7 7 29	11 9	41 22	48 35	12 22 34	1 50
19	8 50	16 34	7 20 29	39 12	41 28	31 12	41 27 59	1 24
25	8 50	16 34	7 33 0	2 8	5 49	43 15	22 10 50	1 1

1793.

June.

19

M	Day lig.	Daylig	Durat.	Pl, (	h's	u's	δ's	♀'s	♂'s
D	begins	ends	twilig.	node	latitude	latitude	latitude	latitude	latitude
1				10m 34	2 13	1 n 3	0 n 18	0 n 6	2 44
7				10 15	2 14	1 2	0 21	1 15	1 50
13	No	real	night	9 56	2 14	1 1	0 25	2 22	0 45
19				9 37	2 15	1 6	0 28	3 13	0 n 21
25				9 18	2 16	0 59	0 32	3 47	1 15

Clock
aft. O

M	☉'s	D's	D's	h's	u's	δ's	♀'s	♂'s
D	longitude	long.	latitude	long.	long.	long.	long.	long.
1	11 19 27	12 40	0 12	9 59	25 15	6 13	4 11	18 48
F	12 16 53	26 35	1 24	10 6 25	8 7	17 3	37 20	14
3	13 14 18	10 21	2 31	10 13 25	1 7	59 3	4 21	44
4	14 11 42	23 56	3 28	10 20 24	54 8	41 2	32 23	18
5	15 9 6	7 21	4 13	10 27 24	47 9	23 2	2 24	54
6	16 6 29	20 34	4 44	10 34 24	40 10	5 1	33 26	32
7	17 3 51	3 36	4 59	10 40 24	34 10	4 1	6 28	13
8	18 1 13	16 25	4 59	10 47 24	27 11	28 0	42 29	56
F	18 58 34	29 0	4 44	10 53 24	21 12	9 0	20 1	42
10	19 55 55	11 22	4 15	11 0 24	15 12	51 0	0 3	31
11	20 53 15	23 32	3 36	11 6 24	9 13	32 29	8 42	5 22
12	21 50 34	5 31	2 47	11 13 24	3 14	14 29	27 7	16
13	22 47 52	17 22	1 52	11 19 23	57 14	55 29	14 9	12
14	23 45 9	29 10	0 52	11 25 23	51 15	37 29	2 11	10
15	24 42 26	10 58	0 n 11	11 32 23	45 16	18 28	52 13	10
F	25 39 42	22 53	1 14	11 38 23	40 16	59 28	45 15	13
17	26 36 57	5 20	2 14	11 44 23	34 17	40 28	42 17	18
18	27 34 11	17 23	3 10	11 50 23	29 18	21 28	42 19	25
19	28 31 24	0 11 8	3 58	11 56 23	24 19	2 28	44 21	33
20	29 28 37	13 19	4 34	12 2 23	19 19	43 28	48 23	42
21	30 25 49	26 50	4 57	12 8 23	14 20	24 28	54 25	52
22	1 23 1	10 59	5 3	12 14 23	9 21	5 29	2 28	2
F	2 20 12	25 25	4 50	12 20 23	5 21	46 29	12 0	13
24	3 17 23	10 9 7	4 18	12 26 23	6 22	27 29	24 2	24
25	4 14 34	24 58	3 28	12 32 22	56 23	0 29	37 4	35
26	5 11 45	9 49	2 24	12 38 22	52 23	48 29	52 6	46
27	6 8 56	24 33	1 10	12 44 22	48 24	29 0	11 9	56
28	7 6 7	9 4	0 7	12 49 22	44 25	10 0	29 11	5
29	8 3 12	23 20	1 22	12 55 22	41 25	51 0	51 13	13
F	9 0 29	7 17	2 31	13 0 22	37 26	32 1	15 15	19

h
rises

M	u's	δ's	♀'s	♂'s	h's	u's	δ's	♀'s	♂'s
D	sets	rises	rises	sets	declin.	declin.	declin.	declin.	declin.
1	3 m 22	3 m 34	3 m 23	3 m 9	12 n 43	18 5	1 n 43	21 n 6	14 n 48
7	2 45	3 23	3 0 3	4 12	55 17	56 22	25 19	11 18	0
13	2 29	3 12	2 38	3 51	13 7	17 48	23 1	17 42	21 7
19	2 3	3 1	2 19	3 17	13 18	17 41	23 28	16 45	21 33
25	1 37	2 51	2 1	3 36	13 28	17 35	23 49	16 24	24 38

B z

The LUNATIONS.

New Moon the 8th day, at 33 minutes past 4 morning.

First quarter the 16th day, at 54 minutes past 8 morning.

Full Moon the 23d day, at 22 minutes past 7 morning.

Last quarter the 29th day, at 46 minutes past 10 night.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock	
D	remark. days	rises	sets	declin.	declin.	& sets	South	bef. ☉	
1		3 46	8 14	23 n 5	4 n 57	o m 3	6 m 28	3 25	
2	Visit. of B. V. M. Ca. Co.	3 47	8 14	23 1	8 58	o 29	7 17	3 37	
3	Dog days begin	3 47	8 13	22 56	12 28	o 58	8 7	3 48	
4	Trans. St. Mar.	3 47	8 13	22 51	15 19	1 29	8 56	3 59	
5	Cam. T. e. O. M.	3 48	8 12	22 45	17 22	2 4	9 45	4 9	
6		3 49	8 11	22 39	18 33	2 45	10 35	4 19	
7	6 S. st. Trin.	3 50	8 11	22 32	18 51	3 29	11 25	4 29	
8	Oxford Act	3 50	8 10	22 26	18 15	☉ sets	o a 13	4 38	
9		3 51	8 9	22 18	16 51	8 a 38	1 o	4 47	
10		3 52	8 8	22 11	14 44	9 9	1 46	4 56	
11		3 53	8 7	22 3	12 o	9 36	2 31	5 4	
12		3 54	8 6	21 54	8 48	10 2	3 14	5 12	
13	Oxf. T. ends	3 55	8 5	21 46	5 15	10 25	3 57	5 19	
14	7 S. st. Trin.	3 56	8 4	21 36	1 28	10 47	4 40	5 26	
15	Swithin.	3 57	8 3	21 27	2 26	11 10	5 23	5 32	
16		3 58	8 2	21 17	6 19	11 35	6 8	5 38	
17		3 59	8 1	21 7	10 1	morn	6 55	5 43	
18		4 o	8 o	20 56	13 20	o 3	7 46	5 47	
19		4 2	7 58	20 45	16 5	o 37	8 40	5 51	
20	Margaret	4 3	7 57	20 34	17 59	1 17	9 37	5 55	
21	13 S. st. Trin.	4 4	7 56	20 22	18 47	2 5	10 37	5 58	
22	Magdalen	4 5	7 55	20 10	18 21	3 5	11 38	6 o	
23		4 7	7 53	19 58	16 36	☉ rises	morn	6 2	
24		4 8	7 52	19 45	13 42	8 a 32	o 39	6 3	
25	St. James	4 10	7 50	19 32	9 53	9 7	1 38	6 3	
26	S. Anne	4 11	7 49	19 19	5 30	9 36	2 35	6 3	
27	6 S. st. Trin.	4 12	7 48	19 5	o 54	10 4	3 29	6 3	
28		4 14	7 46	18 51	3 n 38	10 33	4 21	6 2	
29		4 15	7 45	18 37	7 51	10 59	5 11	6 o	
30		4 17	7 43	18 23	11 33	11 31	6 1	5 58	
31		4 18	7 42	18 8	14 35	morn	6 51	5 55	
M	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	☉
D	decreas.	of day	long. ♀	long. ♀	long. ♂	long. ☉	long. ♀	long. ♂	rises
1	o 6	16 28	7 8 46	o 7 36	18 11 52	9 59 58	1 39	10 56	o n 40
7	o 12	16 22	7 59	1 4 21	52 15 41	11 8	10 11 46	o 18	
13	o 24	16 10	8 12	1 33 24	51 21 24	20 38	5 25	11 a 56	
19	o 38	15 56	8 25	2 1 27	48 27 8	o 7	26 15	11 34	
25	o 54	15 40	8 38	2 29	o 43	2 52	9 37	14 m 38	11 12

1793.

July.

21

M	Daylig.	Daylig.	Durat.	Pl.	D's	h's	u's	δ's	♀'s	♂'s
D	begins	ends	twilig.	node	latitude	latitude	latitude	latitude	latitude	latitude
1				8m59	2 17	0 n 57	0 n 35	4 9	1 n 46	
7	No	real	night	8 40	2 18	0 56	0 38	4 18	1 50	
13				8 21	2 20	0 54	0 41	4 19	1 32	
19				8 2	2 21	0 53	0 44	4 12	0 55	
25	0 45	11 7	3 17	7 43	2 22	0 51	0 48	4 0	0 4	

M	☉'s	D's	D's	h's	u's	δ's	♀'s	♂'s
D	longitude	long.	latitude	long.	long.	long.	long.	long.
1	29 57 41	20 58	3 30	13 8 5	22 11 12	1 11 40	17 52 5	
2	10 54 53	4 21	4 16	13 11 22	31 27 53	2 7 19	29	
3	11 52 6	17 30	4 47	13 16 22	28 28 33	2 35 21	31	
4	12 49 19	0 25	5 4	13 21 22	25 29 14	3 5 23	31	
5	13 46 32	13 8	5 4	13 26 22	23 20 54	3 36 25	29	
6	14 43 40	25 38	4 51	13 31 22	20 0 34	4 8 27	26	
F	15 41 0	7 58	4 23	13 36 22	18 1 14	4 41 29	2	
8	16 38 14	20 7	3 44	13 41 22	16 1 55	5 15 18	16	
9	17 35 29	2 7	2 56	13 45 22	14 2 35	5 51 3	7	
10	18 32 44	14 0	2 0	13 50 22	13 3 15	6 20 4	55	

11	19 29 59	25 48	0 59	13 54 22	11 3 55	7 8 6	42	
12	20 27 14	7 23	0 n 4	13 59 22	10 4 35	7 48 8	28	
13	21 24 29	19 23	1 8	14 3 22	9 5 15	8 29 10	12	
F	22 21 44	1 17	2 9	14 8 22	8 5 55	9 11 11	54	
15	23 18 59	13 23	3 6	14 12 22	7 6 35	9 54 13	34	
16	24 16 15	25 45	3 55	14 16 22	6 7 15	10 38 13	11	
17	25 13 30	8 m 38	4 34	14 20 22	6 7 55	11 22 16	46	
18	26 10 46	21 36	5 0	14 24 22	D 6 8 39	12 5 18	20	
19	27 8 1	5 12	5 11	14 28 22	6 9 14	12 5 19	54	
20	28 5 17	19 16	5 4	14 32 22	6 9 54	13 39 21	25	
F	29 2 34	3 46	4 37	14 36 22	7 10 33	14 19 22	53	
22	29 59 51	18 37	3 51	14 39 22	7 11 13	15 14 24	19	
23	0 57 9	3 41	2 49	14 43 22	8 11 52	16 3 5	43	
24	1 54 27	18 50	1 34	14 47 22	9 12 32	15 54 27	5	
25	2 51 46	3 53	0 13	14 50 22	10 13 11	17 46 28	26	
26	3 49 6	18 42	1 3	14 53 22	11 13 52	18 38 19	45	
27	4 46 28	3 12	2 22	14 56 22	13 14 31	19 30 17	1	
F	5 43 50	17 20	3 26	14 59 22	14 15 11	20 23 2	14	
29	6 41 13	18 5	4 17	15 2 22	16 15 50	21 16 3	25	
30	7 38 38	14 27	4 51	15 5 22	18 16 30	22 10 4	35	
31	8 36 4	27 29	5 16	15 8 22	20 17 0	23 4 5	43	

M	u's	δ's	♀'s	♂'s	h's	u's	δ's	♀'s	♂'s
D	fets	rises	rises	fets	declin.	declin.	declin.	declin.	declin.
1	1m 11	2m 42	1m 46	8 55	13 n 36	17 34	24 n 1	16 n 28	14 n 5
7	0 45	2 36	1 31	9 7	13 44	17 28	24 6	16 52	22 6
13	0 19	2 30	1 19	9 8	13 51	17 27	24 3	17 29	19 11
19	1 53	2 24	1 8	9 1	13 58	17 28	23 53	18 12	15 44
25	1 28	2 18	1 1	8 48	14 3	17 30	23 36	18 56	12 6

THE LUNATIONS.

New Moon the 6th day, at 33 minutes past 7 afternoon.

First quarter the 14th day, at 26 minutes past 9 night.

Full Moon the 21st day, at 46 minutes past 2 afternoon.

Last quarter the 28th day, at 18 minutes past 9 morning.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock
D	remark. days	rises	sets	declin.	declin.	& sets	South	bef. ☉
1	Lammas Day	4 20	7 40	17 n 53	16 n 50	0 m 5	7 m 41	5 51
2		4 22	7 38	17 37	18 15	0 44	8 31	5 47
3		4 23	7 37	17 21	18 46	1 26	9 20	5 43
4	10 S. aft. Trin.	4 25	7 35	17 5	18 26	2 16	10 9	5 37
5		4 26	7 34	16 49	17 16	3 9	10 56	5 32
6	Transfiguration	4 28	7 32	16 33	15 21	☉ sets	11 43	5 25
7	Prs. Amelia b.	N of J.	7 30	16 16	12 48	7 a 34	0 a 28	5 18
8		4 31	7 29	15 59	9 44	8 7	1 13	5 11
9		4 33	7 27	15 41	6 17	8 30	1 56	5 3
10	St. Laurence	4 35	7 25	15 24	2 34	8 54	2 30	4 54
11	11 S. aft. Trin.	Prs. B. h.	Dogd. e.	15 6	1 17	9 15	3 21	4 45
12	Pr. Wales bn.	O. Lam	7 22	14 48	5 8	9 40	4 5	4 35
13		4 40	7 20	14 29	8 49	10 6	4 51	4 24
14		4 42	7 18	14 11	12 13	10 36	5 39	4 13
15	Assumption	4 44	7 16	13 52	15 6	11 12	6 30	4 2
16	☉ of York. b.	4 45	7 15	13 3	17 17	11 55	7 24	3 50
17		4 47	7 13	13 14	18 31	morn	8 21	3 37
18	12 S. aft. Trin.	4 49	7 11	12 54	18 39	0 49	9 21	3 24
19		4 51	7 9	12 35	17 31	1 52	10 22	3 10
20		4 53	7 7	12 15	15 9	3 4	11 22	2 56
21	☉ Clarence. b.	4 54	7 6	11 59	11 43	☉ sets	morn	2 41
22		4 56	7 4	11 34	7 29	7 a 38	0 21	2 26
23		4 58	7 2	11 14	2 50	8 8	1 18	2 11
24	St. Bartholom.	5 0	7 0	10 53	1 n 54	8 37	2 13	1 55
25	13 S. aft. Trin.	5 2	6 58	10 33	6 24	9 5	3 6	1 39
26		5 4	6 56	10 12	10 24	9 36	3 58	1 22
27		5 6	6 54	9 51	13 43	10 10	4 50	1 5
28	St. Augustine	5 8	6 52	9 29	16 15	10 48	5 41	0 47
29	Beh. J. Bap.	5 9	6 51	9 8	17 35	11 30	6 32	0 30
30		5 11	6 49	8 47	18 47	morn	7 22	0 12
31		5 13	6 47	8 25	18 34	0 16	8 11	0 17
M	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	H
D	decreaf.	of day	long. ♀	long. ♂	long. ♂	long. ☉	long. ♀	long. ☉
1	1 14	15 20	8 53	3 1	4 26	6 9	34 20	5 4
7	1 34	15 0	9 6	3 31	6 58	15 19	0 17	10 56
13	1 54	14 40	9 19	3 59	9 49	21 5	9 50	7 54
19	2 16	14 18	9 32	4 28	12 38	26 51	19 24	25 47
25	2 38	13 56	9 45	4 56	15 26	2 38	28 58	15 50

1793, W

August.

23

M	Day-lig	Day-lig	Durat.	Pl. D's	h's	u's	δ's	♀'s	♀'s
D	begins	ends	twilig.	node	latitude	latitude	latitude	latitude	latitude
1	I 24	10 34	2 55	7 12	23	0 49	0 51	3 39	1 8
7	I 47	10 11	2 42	7 12	24	0 48	0 54	3 18	1 15
13	2 9	9 49	2 30	6 42	26	0 47	0 57	2 55	3 20
19	2 29	9 36	2 21	6 23	27	0 46	1 01	2 36	4 15
25	2 47	9 12	2 14	6 4	29	0 44	1 2	2 3	4 33
M	☉	☉	D's	D's	h's	u's	δ's	♀'s	♀'s
D	longitude	long.	long.	latitude	long.	long.	long.	long.	long.
1	Ω 9	33 31	10 11	14 5 13	15 8 11	22 22	17 23	23 11	58 6 27
2	10	30 59	22 43	5 1 15	15 14 22	25 18	28 24	53 7	51
3	11	28 28	4 59	4 35	15 16 22	27 19	7 25	48 8	51
4	12	25 59	17 5	3 58	15 19 22	30 19	46 26	44 9	46
5	13	23 32	29 4	3 10	15 21 22	33 20	25 27	41 10	39
6	14	21 6	10 56	2 14	15 24 22	37 21	4 28	39 11	29
7	15	18 40	22 45	1 13	15 26 22	41 21	43 29	37 12	11
8	16	16 16	4 31	0 8	15 28 22	45 22	22 0	35 13	0
9	17	13 53	16 19	0 57	15 30 22	49 23	1 1	33 13	40
10	18	11 31	28 10	2 0	15 32 22	53 23	40 2	32 14	15
11	19	9 10	10 7	2 58	15 34 22	57 24	19 3	31 14	47
12	20	6 50	22 16	3 49	15 36 23	1 24	58 4	31 15	13
13	21	4 31	4 38	4 31	15 37 23	5 25	36 5	31 16	40
14	22	2 13	17 19	5 1	15 39 23	10 26	15 6	31 16	0
15	23	59 55	0 23	5 16	15 40 23	14 26	54 7	32 16	14
16	23	57 34	13 51	5 14	15 42 23	19 27	32 8	33 16	28
17	24	55 24	27 47	4 55	15 4 23	24 28	11 9	34 16	23
18	25	53 10	12 8	4 17	15 43 23	29 28	50 10	36 16	20
19	26	50 57	26 54	3 21	15 45 23	34 29	28 11	38 16	14
20	27	48 45	11 56	2 10	15 45 23	39 0	Ω 6	40 16	0
21	28	46 34	27 8	0 49	15 46 23	45 0	45 13	42 15	4
22	29	44 25	12 19	0 35	15 46 23	51 1	23 14	45 15	15
23	30	42 17	27 21	1 56	15 46 23	57 2	2 15	48 14	43
24	1	40 11	12 5	3 8	15 47 24	3 2	40 16	52 14	6
25	2	38 7	26 26	4 5	15 47 24	9 3	18 17	56 13	25
26	3	36 4	10 28	4 47	15 47 24	16 3	57 19	0 12	40
27	4	34 4	23 49	5 11	15 47 24	22 4	35 20	4 11	49
28	5	32 6	4 53	5 18	15 47 24	29 5	13 21	8 10	53
29	6	30 10	19 34	5 9	15 47 24	35 5	51 22	13 9	56
30	7	28 16	12 57	4 46	15 47 24	42 6	29 23	18 8	59
31	8	26 24	14 6	4 11	15 47 24	49 7	7 24	23 8	3
M	☉	☉	☉	☉	h's	u's	δ's	♀'s	♀'s
D	sets	rites	rites	sets	declin.	declin.	declin.	declin.	declin.
1	11 2	2 m 13	0 m 56	8 29	14 8	17 35	23 7	19 43	7 59
2	10 4	2 12	0 54	8 8	14 11	17 41	22 36	20 10	4 53
3	10 18	2 10	0 54	7 45	14 12	17 49	21 59	20 26	2 35
4	9 57	2 9	0 53	7 17	14 13	17 58	21 16	20 28	1 34
5	9 36	2 8	1 4	6 48	14 13	18 8	20 27	20 13	2 16

THE LUNATIONS.

New Moon the 5th day, at 57 minutes past 11 morning.

First quarter the 13th day, at 52 minutes past 7 morning.

Full Moon the 19th day, at 8 minutes past 11 night.

Last quarter the 26th day, at 36 minutes past 11 night.

V	Sundays & other D. remarks days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉
1		Giles	6 45	8 n 3	17 n 37	1 m 9	8 m 59	0 25
2	Long. bur. 1666	5 17	6 43	7 41	15 53	2 5	9 47	0 44
3		5 16	6 41	7 19	13 30	3 4	10 32	1 4
4		5 21	6 39	6 57	10 33	4 6	11 17	1 23
5		5 23	6 37	6 34	7 11	(sets)	o a 1	1 43
6		5 23	6 35	6 12	3 31	7 a 6	0 44	2 4
7	Enurchns.	5 27	6 33	5 49	0 20	7 29	1 28	2 22
8	13 S. 1st. Trin.	Nativ	6 34	5 27	4 12	7 52	2 11	2 43
9		5 31	6 29	5 4	7 56	8 13	2 56	3 3
10		5 31	6 28	4 41	11 23	8 47	3 43	3 24
11		5 34	6 26	4 18	14 23	9 18	4 32	3 44
12		5 36	6 24	3 55	16 44	9 58	5 24	4 5
13		5 38	6 22	3 32	18 15	10 47	6 18	4 26
14	16 S. 1st. Trin.	5 40	6 20	3 9	18 46	11 43	7 16	4 47
		5 42	6 18	2 46	18 8	morn	8 15	5 8
16		5 44	6 16	2 23	16 18	0 51	9 13	5 29
17	Lambert	5 47	6 14	2 0	13 22	2 5	10 11	5 50
18	1st. Week	5 48	6 12	1 36	9 30	3 25	11 9	6 11
19		5 50	6 10	1 13	5 1	(rises)	morn	6 32
20		5 52	6 8	0 50	0 13	6 n 42	0 5	6 53
21	17 S. Mt. Trin.	5 54	6 6	0 26	4 n 30	7 12	1 0	7 14
22	(K. Gro. 3rd)	5 56	6 4	0 3	8 52	7 43	1 54	7 35
23		5 58	6 2	0 21	12 35	8 16	2 48	7 56
24		6 0	6 0	0 44	15 31	8 52	3 41	8 16
25	Holy Cross	6 2	5 58	1 7	17 32	9 34	4 33	8 36
26	St. Cyprian	6 4	5 56	1 31	18 37	10 21	5 25	8 57
27		6 6	5 54	1 54	18 45	11 12	6 15	9 17
28	18 S. 1st. Trin.	6 8	5 52	2 18	18 1	morn	7 4	9 36
29		Mic.	2 41	16 29	0 7	7 52	9 56	
30	St. Jerome	6 12	5 48	3 4	14 15	1 6	8 39	10 15

M	Day	Length of day	Helioc. long.	Helioc. long.	Helioc. long.	Helioc. long.	Helioc. long.	Helioc. long.	H rises
1	3	4 13	10 8	5 28	18 20	9 25	10 8	9 22	8 a 52
7	3	4 13	10 13	5 57	21 26	15 14	19 46	11 59	8 30
13	3	4 12	10 26	6 25	24 12	11 52	24 15	15 53	8 8
19	4	4 12	10 39	6 54	26 54	12 57	27 9	23 20	7 46
25	4	4 11	10 52	7 22	29 37	14 49	30 18	26 51	7 25

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September.

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M	Daylig.	Day lig	Durat.	Pl. D's	h's	u's	δ's	♀'s	♂'s
D	begins	ends.	twilig.	node	latitude	latitude	latitude	latitude	latitude
1	3 7	8 52	2 7	5 ^m 42	2 30	0 n 42	1 0 6	1 32	3 30
7	3 23	8 36	2 7	5 23	2 32	0 41	1 8	1 5	1 50
13	3 38	8 21	1 59	5 4	2 33	0 40	1 11	0 39	0 0
19	3 52	8 7	1 57	4 45	2 34	0 39	1 13	0 14	1 n 16
25	4 5	7 54	1 57	4 26	2 35	0 38	1 16	0 n 9	1 50

M	☉'s	☽'s	☽'s	h's	u's	δ's	♀'s	♂'s
D	longitude	long.	latitude	long.	long.	long.	long.	long.
1	12 9	24 32	26 23	4 3 25	15 47	2 47 56	7 45	25 29
2	10 22	44	7 56	2 30	15 46	25 3	8 23	26 35
3	11 20	58	19 43	1 30	15 46	25 11	9 12	27 41
4	12 19	13	1 m 30	0 25	15 45	25 19	9 39	28 48
5	13 17	32	13 19	0 n 40	15 44	25 27	10 17	29 54

6	14 15	51	25 11	1 44	15 43	25 38	10 55	1 0	3 29
7	15 14	12	7 10	2 44	15 42	25 43	11 33	2 7	3 4
8	16 12	35	19 17	3 38	15 41	25 51	12 11	3 14	2 47
9	17 10	59	1 m 34	4 22	15 39	25 59	12 40	4 21	2 D 40
10	18 9	25	14 3	4 54	15 38	26 8	13 26	5 29	2 44
11	19 7	53	26 48	5 13	15 36	26 16	14 4	6 36	2 56
12	20 6	22	9 51	5 16	15 35	26 24	14 42	7 43	3 17
13	21 4	52	23 14	5 2	15 33	26 33	15 19	8 51	3 47
14	22 3	24	6 59	4 32	15 31	26 42	15 57	9 59	4 25
15	23 1	58	11 6	3 44	15 29	26 51	16 34	11 7	5 12

16	24 0	33	5 35	2 40	15 27	27 0	17 12	12 16	6 9
17	24 59	10	20 21	1 25	15 27	27 9	17 49	13 24	7 43
18	25 57	49	5 20	0 3	15 23	27 18	18 27	14 32	8 23
19	26 56	30	20 25	1 19	15 20	27 28	19 47	15 41	9 38
20	27 55	12	5 25	2 36	15 18	27 38	19 42	16 50	10 58
21	28 53	56	20 14	3 40	15 15	27 48	20 19	17 59	12 24
22	29 52	43	4 42	4 30	15 13	27 58	20 56	19 9	13 56
23	0 51	33	18 45	5 1	15 10	28 8	21 33	20 18	15 31
24	1 50	24	2 21	5 14	15 8	28 18	22 10	21 27	17 8
25	2 49	17	15 31	5 10	15 5	28 29	22 47	22 37	18 26

26	3 48	13	28 15	4 51	15 2	28 39	23 24	23 4	20 30
27	4 47	11	10 38	4 18	14 59	28 49	24 1	24 57	22 14
28	5 46	12	22 45	3 35	14 56	28 59	24 38	26 7	23 59
29	6 45	15	4 40	2 43	14 53	29 9	25 15	27 18	25 45
30	7 44	20	16 29	1 44	14 50	29 19	25 52	28 28	27 31

M	u's	δ's	♀'s	♂'s	h's	u's	δ's	♀'s	♂'s
D	sets	rises	rises	rises	declin.	declin.	declin.	declin.	declin.
1	9 13	2 m 7	1 m 15	5 m 2	14 11	18 20	19 25	19 34	5 n 33
7	8 53	2 7	1 27	4 20	14 8	18 32	18 26	18 39	8 41
13	8 33	2 7	1 41	3 59	14 5	18 45	17 23	17 26	10 8
19	8 14	2 7	1 56	4 10	14 0	18 50	16 17	15 56	9 9
25	7 55	2 7	2 13	4 20	13 54	19 14	15 8	14 8	6 8

The LUNATIONS.

New Moon the 5th day, at 37 minutes past 4 morning.

First quarter the 12th day, at 46 minutes past 4 afternoon.

Full Moon the 19th day, at 0 minutes past 9 morning.

Last quarter the 26th day, at 47 minutes past 5 afternoon.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock
D	remark. days	rises	sets	declin.	declin.	& sets	South	aft. ☉
1	St. Michael	6 14	5 40	3 28	11 27	2 16	9 24	10 34
2		6 16	5 44	3 51	8 10	3 10	9 10	52
3		6 18	5 42	4 14	4 32	4 12	10 51	10 10
4		6 20	5 40	4 38	0 41	5 15	11 35	11 28
5		6 22	5 38	5 1	3 14	D sets	0 19	11 46
6	S. aft. Trin.	Faith	5 36	5 24	7 5	6 31	1 4	12 3
7		6 26	5 34	5 47	10 40	6 58	1 50	12 19
8		6 28	5 32	6 10	13 50	7 29	2 39	12 36
9	St. Denys	6 29	5 31	6 33	16 22	8 7	3 30	12 52
10	St. & Cam. T. b.	O. Mic	5 29	6 55	18 6	8 52	4 23	1 7
11		6 33	5 27	7 18	18 53	9 43	5 17	13 22
12		6 35	5 25	7 41	18 34	10 44	6 13	13 36
13	S. aft. Trin.	6 37	5 23	8 3	17 8	11 52	7 1	13 50
14	Tr. K. Edward	6 39	5 21	8 25	14 37	m rn	8 7	14 4
15		6 41	5 19	8 48	11 10	1 9	9 2	14 16
16		6 43	5 17	9 10	6 59	2 28	9 57	14 29
17	St. Ebbelred.	6 45	5 15	9 32	2 21	3 47	10 52	14 41
18	St. Luke	6 47	5 13	9 54	2 26	5 9	11 46	14 52
19		6 49	5 11	10 15	7 1	☉ rises	morn	15 2
20	S. aft. Trin.	6 51	5 9	10 37	11 7	6 16	0 40	15 12
21		6 53	5 7	10 58	14 30	6 52	1 33	15 22
22		6 55	5 5	11 19	16 59	7 33	2 27	15 30
23		6 56	5 4	11 40	18 29	8 17	3 20	15 38
24		6 58	5 2	12 1	18 59	9 7	4 12	15 45
25	St. Geo. 3 Ac.	Crispin	5 0	12 22	18 32	10 3	5 3	15 51
26	St. Geo. 3 Pro.		7 2	4 58	12 43	17 14	11 0	5 53
27	S. aft. Trin.	7 4	4 56	13 3	12 11	11 59	6 40	16 2
28	St. Sim. & Jude	7 6	4 54	13 23	12 32	morn	7 25	16 6
29		7 8	4 52	13 43	9 21	1 2	8 9	16 1
30		7 9	4 51	14 2	5 48	2 5	8 53	16 12
31		7 11	4 49	14 22	1 58	3 9	9 30	16 14
M	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	H
D	decreas.	of day	long. ♀	long. ♀	long. ♂	long. ♂	long. ♂	rises
1	5	21 32	11 8	7 15	28 19	8 43	28 11 25	1 34
7	5	20 11	8 16	8 19	5 0	14 39	8 5 7	27 47
13	5	28 10	46 11	31 8	47 7	41 20	30 17	50 19
19	6	12 10	22 11	44 9	16 10	21 26	33 27	35 8
25	6	10 10	0 11	67 0	45 11	0 28	12 7	20 26

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October:

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M	Daylig.	Day lig.	Durat.	Pl. D's	h's	u's	δ's	♀'s	♂'s
D	begins	ends	twilig.	node	latitude	latitude	latitude	latitude	latitude
1	4 18	7 41	1 55	4m 7	28 36	0n 37	1n 18	0n 31	1n 50
7	4 31	7 28	1 54	3 48	2 37	0 36	1 21	0 30	1 29
13	4 43	7 16	1 53	3 28	2 37	0 35	1 23	1 30	0 55
19	4 55	7 4	1 53	3 9	2 38	0 34	1 26	1 20	0 16
25	5 6	6 53	1 53	2 50	2 38	0 34	1 28	1 31	0 24

M	☉'s	D's	D's	h's	u's	δ's	♀'s	♂'s
D	longitude	long.	latitude	long.	long.	long.	long.	long.

1	8 43 28	28 53	0 41	14 46	29 12	26 12	29 38	29 14
2	9 42 38	10 12	0 23	14 42	29 49	27 6	0 12	1 25
3	10 41 50	21 56	1 27	14 39	29 51	27 43	1 50	2 52
4	11 41 5	3 57	2 28	14 35	0 28	19 3	10 4	39
5	12 40 22	16 8	3 22	14 32	0 13	28 56	4 21	6 25

F	13 39 41	28 29	4 8	14 28	0 24	29 33	5 3	8 11
7	14 39 2	11 2	4 41	14 24	0 35	0 9	6 43	9 57
8	15 38 24	23 47	5 4	14 20	0 46	0 46	7 54	11 42
9	16 37 48	6 45	5 10	14 16	0 57	1 22	9 13	25
10	17 37 14	19 57	4 59	14 12	1 8	1 59	10 17	15 11

11	18 36 42	3 22	4 33	14 8	1 20	2 35	11 29	10 55
12	19 36 12	17 3	3 51	14 4	1 31	3 12	12 40	18 36
F	20 35 43	0 59	2 54	13 59	1 43	3 48	13 52	20 20
14	21 31 17	15 10	1 46	13 54	1 55	4 25	15 4	22 1
15	22 34 51	29 35	0 30	13 50	2 7	5 16	16 23	42

16	23 34 27	14 12	0 49	13 45	2 19	5 37	17 29	25 22
17	24 34 5	28 55	2 5	13 41	2 31	6 13	18 41	27 1
18	25 33 45	13 39	3 13	13 37	2 43	6 49	19 53	28 40
19	26 33 27	28 15	4 7	13 33	2 55	7 25	1 6	om 19
F	27 33 11	12 38	4 44	13 28	3 7	8 12	18 1	57

21	28 32 57	26 41	5 3	13 24	3 19	8 37	23 31	3 34
22	29 32 45	10 19	5 13	19 3	3 31	9 1	24 43	5 11
23	30 32 36	23 31	4 49	13 15	3 43	9 49	25 56	6 47
24	1 32 29	6 19	4 20	13 10	3 55	10 25	27 8	8 23
25	2 32 24	18 45	3 39	13 5	4 8	11 12	28 21	9 56

26	3 32 21	0 54	2 49	13 1	4 20	11 37	29 34	11 33
F	4 32 21	12 49	1 52	12 56	4 33	12 12	0 47	13 1
28	5 32 23	24 38	0 51	12 51	4 45	12 48	2 0	14 40
29	6 32 27	6 25	0 12	12 47	4 58	13 23	3 13	16 13
30	7 32 33	18 15	1 15	12 42	5 10	13 59	4 27	17 46
31	8 32 42	0 13	2 15	12 37	5 23	14 35	5 40	19 18

M	☿	♂	♀	♂	h's	u's	δ's	♀'s	♂'s
D	sets	rises	rises	rises	declin.	declin.	declin.	declin.	declin.

1	7 36	2 m 7	2 31	5 18	13 48	19 28	13 59	12 0	11 58
7	7 16	2 6	2 48	5 58	13 41	19 42	12 41	9 49	2 35
13	6 57	2 5	3 7	6 32	13 33	19 57	13 25	7 22	7 6
19	6 38	2 3	3 24	7 10	13 25	20 12	10 7	4 46	1 21
25	6 19	2 0	4 42	7 44	13 16	20 27	8 48	2 12	12

The LUNATIONS.

New Moon the 3d day, at 26 minutes past 8 night.

First quarter the 10 h day, at 44 minutes past 12 night.

Full Moon the 17th day, at 46 minutes past 8 night.

Last quarter the 25th day, at 47 minutes past 2 afternoon.

M	Sundays & other	☉	☉	☉'s	D's	D rises	D	Clock
D.	remark. days	rises	sets	declin.	declin.	& sets	South	aft. ☉
1	St. Euseb. b.	7 13	4 47	14 41	18 59	4 m 13	10 m 19	16 15
2	St. S. aft. T.	7 14	4 45	15 0	5 57	5 18	11 3	16 15
3	St. Wm. landed	7 15	4 43	15 19	9 43	D sets	11 49	16 14
4	St. Peter Pl.	7 18	4 42	15 37	13 7	5 a 32	0 a 37	16 13
5		7 20	4 40	15 56	15 55	6 8	1 28	16 10
6	Leonard. 1st. d.	7 22	4 38	16 14	17 56	6 50	2 21	16 7
7	St. Aug. Sol. h.	7 24	4 36	16 31	18 59	7 41	3 10	16 3
8		7 25	4 35	16 49	18 57	8 40	4 12	15 58
9	St. Mayors day	7 27	4 33	17 6	17 47	9 45	5 8	15 53
10		7 29	4 31	17 23	15 33	10 58	6 4	15 46
11	St. Martin	7 30	4 30	17 39	12 23	morn	6 58	15 39
12	Cam. T. div. m.	7 32	4 28	17 55	8 28	0 13	7 51	15 31
13	Britius	7 33	4 27	18 11	4 2	1 29	8 43	15 22
14		7 35	4 25	18 27	0 n 38	2 48	9 35	15 12
15	Machutus	7 37	4 23	18 42	5 15	4 5	10 27	15 1
16	St. S. aft. T. d.	7 38	4 22	18 57	9 33	5 23	11 19	14 50
17	Hugh.	7 40	4 20	19 12	13 16	Drises	morn	14 38
18		7 41	4 19	19 26	16 11	5 a 24	0 12	14 24
19		7 42	4 18	19 40	18 10	6 6	1 6	14 11
20	Edmund	7 44	4 16	19 53	19 6	6 54	1 59	13 56
21		7 45	4 15	20 6	19 2	7 46	2 51	13 40
22	Cecilia: Old	Mart. d	4 13	20 19	18 5	8 44	3 41	13 24
23	St. Clement	7 48	4 12	20 32	16 14	9 44	4 30	13 7
24	St. of G. out. b	7 49	4 11	20 44	13 44	10 44	5 16	12 49
25	Cather.	7 50	4 9	20 55	10 42	11 46	6 0	12 30
26		7 52	4 8	21 7	7 15	morn	6 43	12 11
27		7 53	4 7	21 17	3 30	0 50	7 26	11 50
28	Mic. Term ends	7 54	4 6	21 28	0 s 27	1 54	8 9	11 28
29		7 55	4 5	21 38	4 26	2 58	8 52	11 8
30		7 56	4 4	21 48	8 20	4 4	9 37	10 45
M	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.
D.	decreaf.	of day	long. ♀	long. ♀	long. ♂	long. ⊕	long. ♀	long. ♂
1	7 c	9 34	12 8	12 10	18 16	8 9	18 43	15 1 28
7	7 21	9 12	12 25	10 47	18 44	15 35	28 28	2 7 2
13	7 40	8 54	12 38	11 15	21 22	11 37	8 n 13	19 38
19	7 58	8 36	12 51	11 44	23 59	27 41	17 2	2 58
25	8 16	8 18	13 4	12 13	26 37	3 11	45 27	42 5 40

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November.

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M	Day	lig.	Day	lig.	Durat.	Pl.	D's	h's	u's	δ's	♀'s	♂'s
D	begins	ends	twilig.	node	latitude	latitude	latitude	latitude	latitude	latitude	latitude	latitude
1	5	17	6	42	1	55	2m28	2 n 38	0 n 33	1 n 31	1 40	1 1 9
7	5	25	6	35	1	59	2 9	2 38	0 32	1 33	1 44	1 44
13	5	33	6	27	2	0	1 50	2 37	0 31	1 35	1 45	2 11
19	5	41	6	19	2	1	1 31	2 37	0 31	1 38	1 43	2 27
25	5	48	6	11	2	5	1 12	2 36	0 30	1 40	1 39	2 26

M	☉'s longitude				D's long.	D's latitude	h's long.	u's long.	♂'s long.	♀'s long.	♂'s long.
1	11	9	32	52	12 22	3 n 9	12 32	5 36	15m10	6 54	20 15
2	10	33	5	24	46	3 56	12 28	5 49	15 46	8 7	22 22
F	11	33	19	7m24	4 31	12 23	6 2	16 21	9 21	23 53	
4	12	33	36	20	18	4 54	12 18	6 15	16 56	10 35	25 24
5	13	33	54	3 1	25	5 2	12 13	6 28	17 31	11 49	26 54
6	14	34	14	16	46	4 53	12 8	6 41	18 6	13 32	28 24
7	15	34	35	0v5	17	4 29	12 3	6 56	18 41	14 19	29 54
8	16	34	58	13	58	3 48	11 59	7 7	19 16	15 31	1 23
9	17	35	22	27	46	2 54	11 54	7 20	19 51	16 45	2 52
F	18	35	47	13m	48	1 49	11 49	7 33	20 26	17 59	4 20
11	19	36	15	25	44	0 37	11 44	7 46	21 1	19 13	5 48
12	20	36	42	9x	53	0 38	11 39	7 59	21 36	20 27	7 15
13	21	37	11	24	7	1 51	11 34	8 13	22 10	21 41	8 41
14	22	37	42	8v	15	2 57	11 30	8 26	22 45	22 55	10 7
15	23	38	14	22	42	3 52	11 25	8 39	23 19	24 9	11 32
16	24	38	48	6 8	55	4 32	11 20	8 53	23 54	23 23	12 57
F	25	39	23	20	58	4 55	11 15	9 6	24 28	26 13	14 21
18	26	39	59	4m	46	5 0	11 11	9 19	5 3	27 51	15 44
19	27	40	37	18	15	4 48	11 6	9 33	25 37	29 6	17 6
20	28	41	16	12v	22	4 21	11 1	9 46	26 12	30 18	27 27
21	29	41	57	14	9	3 42	10 57	9 59	26 46	31 35	29 46
22	30	42	40	26	35	3 52	10 52	10 13	27 20	32 49	31 4
23	1	43	24	18	44	1 56	10 48	10 26	27 54	33 4	22 20
F	2	44	10	20	41	0 55	10 43	10 39	28 28	34 13	23 34
25	3	44	57	2m	40	0 n	7 10	39 20	53 29	2 6	34 46
26	4	45	46	14	18	1 0	10 35	11 6	29 35	7 48	25 5
27	5	46	37	26	9	2 8	10 31	11 20	0 9	9 22	27 2
28	6	47	29	8m	10	3 3	10 27	11 34	0 42	10 27	28 5
29	7	48	23	20	24	3 50	10 23	11 47	1 16	11 32	29 4
30	8	49	18	2m	56	4 26	10 19	12 1	1 49	12 46	29 59

M	Day	lig.	Day	lig.	D's	D's	h's	u's	δ's	♀'s	♂'s
D	fets	rises	rises	fets	declin.	declin.	declin.	declin.	declin.	declin.	declin.
1	5	57	1m58	4 n 3	5 5	13 n 7	20 5 43	7 n 15	1 13	19 5	5
7	5	37	1 54	4 23	5 0	12 58	20 58	5 55	4 21	21 51	51
13	5	17	1 49	4 38	4 58	12 50	21 11	4 35	6 50	23 56	56
19	4	57	1 43	4 55	4 59	12 42	21 24	3 15	9 33	25 17	17
25	4	36	1 37	5 12	5 4	12 34	21 36	1 55	12 0	25 48	48

The LUNATIONS.

New Moon the 3d day, at 47 minutes past 10 morning.

First quarter the 10th day, at 20 minutes past 3 morning.

Full Moon the 17th day, at 52 minutes past 10 morning.

Last quarter the 25th day, at 32 minutes past 12 noon.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock
D	Remark. days	rises	sets	declin.	declin.	& sets	South	aft. ☉
1	Ado. Sunday	7 5	4 3	21 8 57	11 8 97	5 m 11	10 m 23	10 22
2		7 58	4 2	22 6	19 4	6 21	11 14	9 39
3		7 59	4 1	22 14	17 28	D sets	0 a 5	9 34
4		8 0	4 0	22 2	18 54	5 a 25	1 0	9 10
5		8 1	3 59	22 30	19 15	6 23	1 58	8 44
6	Nicholas	8 2	3 58	22 37	18 23	7 28	2 55	8 18
7		8 3	3 57	22 43	16 2	8 39	3 52	7 52
8	2 Sund. in Adv.	Corcep	3 57	22 49	13 23	9 55	4 47	7 25
9		8 4	3 56	22 55	9 37	11 12	5 40	6 58
10		8 5	3 55	23 0	4 18	morn	6 31	6 30
11		8 5	3 55	23 5	0 44	0 28	7 21	6 2
12		8 6	3 54	23 10	3 51	1 42	8 11	5 34
13	Lucy	8 6	3 54	23 13	8 12	2 56	9 2	5 5
14		8 7	3 53	23 17	12 4	4 10	9 53	4 36
15	3 Sund. in Adv.	8 7	3 53	23 20	15 16	5 23	10 45	4 7
16	Can. 1. e. O.S.	8 8	3 53	23 22	17 36	6 30	11 37	3 38
17	Oxford T. ends	8 8	3 52	23 24	18 57	D rises	morn	3 8
18	Ember week	8 8	3 52	23 26	19 18	5 a 19	0 29	2 39
19		8 8	3 52	23 27	18 40	6 19	1 20	2 9
20		8 8	3 52	23 28	17 9	7 16	2 10	1 30
21	St. Thomas	Shor. d	3 52	23 28	14 53	8 13	2 57	1 9
22	4 Sund. in Adv.	8 8	3 52	23 27	12 0	9 21	3 43	0 39
23		8 8	3 52	23 27	8 41	10 23	4 27	0 9
24		8 8	3 52	23 25	5 11	11 26	5 9	0 21
25	Christmas Day	8 7	3 53	23 24	1 9	morn	5 0	0 51
26	St. Stephen	8 7	3 53	23 21	2 48	0 28	6 33	1 21
27	St. John	8 7	3 53	23 19	6 43	1 33	7 16	1 51
28	Andrew	8 6	3 54	23 16	10 26	2 38	8 1	2 20
29	3 Sund. aft. Chris.	8 6	3 54	23 12	13 46	3 46	8 48	2 49
30		8 6	3 54	23 8	16 31	4 54	9 39	3 19
31	Silvester	8 5	3 55	23 3	18 26	6 20	10 33	3 47
M	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	H
D	decreas.	of day	long. 1	long. 1	long. 2	long. 2	long. 3	sets
1	8 28	8 6	13 8	17 12	14 1	9 11	50 7	25 27
7	8 40	7 54	13 30	13 10	12 15	15 56	17 6	28 28
13	8 46	7 40	13 43	13 39	4 29	22 3	26 46	4 11
19	8 50	7 44	13 57	14 7	7 6	28 9	6 12	24 12
25	8 52	7 45	14 10	14 36	9 43	4 16	16 16	1 16

1793

December.

31

M D	Day begins	Day ends	Durat. twilig.	Pl. D's node	h's latitude	h's latitude	h's latitude	h's latitude	h's latitude
1	5 54	6 6	2 3	0 53	2 35	0 30	1 42	1 32	1 59
7	5 57	6 3	2 6	0 34	2 33	0 29	1 45	1 23	0 51
13	5 59	6 1	2 7	0 15	2 32	0 29	1 47	1 12	1 0
19	6 1	5 59	2 7	29 56	2 30	0 28	1 49	0 59	2 40
25	6 1	5 59	2 6	29 36	2 29	0 27	1 52	0 45	3 4
M D	☉'s longitude	D's long.	D's latitude	h's long.	h's long.	h's long.	h's long.	h's long.	h's long.
1	9 50	14	15 14	4 51	10 8 15	12 13	2 22	14 11	0 49
2	10 51	11	29	5 1	10 13	12 28	2 55	15 16	1 34
3	11 52	10	12 30	4 54	10 7	12 42	3 28	16 31	2 9
4	12 53	10	26 17	4 30	10 4	12 55	4 1	17 46	2 39
5	13 54	11	10 15	3 50	10 0	13 9	4 34	19 1	3 4
6	14 55	12	24 21	2 55	9 56	13 22	5 7	20 16	3 17
7	15 56	14	8 33	1 50	9 53	13 36	5 40	21 31	3 17
F	16 57	17	32 40	0 37	9 50	13 49	6 13	22 46	3 8
9	17 58	20	6 49	0 38	9 46	14 3	6 45	24 1	2 49
10	18 59	24	20 54	1 51	9 43	14 10	7 18	25 16	2 19
11	20 0	28	4 50	2 56	9 39	14 30	7 50	26 31	1 37
12	21 1	32	18 54	3 51	9 36	14 43	8 23	27 46	0 44
13	22 2	37	2 44	4 31	9 34	14 5	8 55	29 12	0 40
14	23 3	42	16 32	4 50	9 31	15 10	9 27	30 16	28 29
F	24 4	47	0 11	5 3	9 28	15 24	9 59	31 27	12
16	25 5	53	13 34	4 58	9 26	15 37	10 30	2 46	25 49
17	26 6	59	20 41	4 28	9 23	15 51	11 2	4 124	27
18	27 8	6	9 34	3 50	9 20	16 4	11 34	5 16	23 6
19	28 9	14	32 11	3 3	9 18	16 18	12 5	6 31	21 47
20	29 10	22	4 31	2 4	9 16	16 31	12 37	7 46	20 37
21	30 11	31	16 38	1 2	9 14	16 45	13 8	9 1	19 36
22	31 12	40	28 54	0 1	9 12	16 58	13 39	10 16	18 43
23	32 13	50	10 23	1 5	9 10	17 11	14 10	11 31	18 1
24	33 15	0	22 10	2 5	9 8	17 25	14 41	12 46	17 30
25	34 16	10	4 2	3 0	9 6	17 38	15 12	14 2	17 9
26	35 17	21	16 2	3 4	9 4	17 51	15 42	15 17	16 58
27	36 18	33	28 17	4 27	9 3	18 4	16 12	16 32	16 58
28	37 19	45	10 17	50	4 54	9 18	16 42	17 48	17 8
29	38 20	58	23 46	5 7	9 0	18 31	17 12	19 3	17 25
30	39 22	11	7 6	5 4	8 59	18 44	17 42	20 18	17 49
31	40 23	24	20 51	4 44	8 58	18 58	18 12	21 33	18 20
M D	☉'s rises	☉'s rises	☉'s rises	☉'s sets	h's declin.	h's declin.	h's declin.	h's declin.	h's declin.
1	8 11	1 29	5 29	5 8	12 28	21 48	0 37	14 36	25 27
7	7 51	1 22	5 45	5 1	12 22	21 59	0 40	16 49	24 17
13	7 31	1 14	6 1	4 32	12 17	22 9	1 55	18 47	22 28
19	7 10	1 5	6 16	3 36	12 14	22 18	3 7	20 27	20 33
25	6 49	0 56	6 29	5 0	12 12	22 27	4 16	21 45	19 47

Months	Days	Heliocentric		Geocentric		Declin.		South	
		longitude	latitude	longitude	latitude	longitude	latitude	h	m
January	1	21 0	12 0	43 13	15 0	45 14	29 14	50	
	11	21 20	0 43	22 56	0 45	14 36	14 5		
	21	21 28	0 43	22 33	0 45	14 44	13 21		
February	1	21 36	0 43	22 5	0 45	14 58	12 34		
	11	21 44	0 43	21 39	0 46	15 1	11 52		
	21	21 52	0 43	21 13	0 46	15 16	11 12		
March	1	21 58	0 43	20 53	0 45	15 16	10 41		
	11	22 6	0 43	20 30	0 45	15 23	10 3		
	21	22 13	0 43	20 10	0 45	15 29	9 25		
April	1	22 22	0 43	19 53	0 45	15 34	8 44		
	11	22 30	0 43	19 43	0 44	15 37	8 7		
	21	22 37	0 43	19 37	0 44	15 39	7 29		
May	1	22 45	0 43	19 37	0 44	15 38	6 52		
	11	22 53	0 43	19 43	0 43	15 36	6 14		
	21	23 1	0 43	19 54	0 43	15 33	5 35		
June	1	23 9	0 43	20 11	0 43	15 27	4 52		
	11	23 17	0 44	20 32	0 42	15 20	4 12		
	21	23 25	0 44	20 57	0 42	15 13	3 32		
July	1	23 32	0 44	21 26	0 42	15 2	2 52		
	11	23 40	0 44	21 58	0 42	14 51	2 13		
	21	23 48	0 44	22 32	0 42	14 46	1 36		
August	1	23 56	0 44	23 11	0 41	14 27	0 55		
	11	24 4	0 44	23 49	0 41	14 15	0 19		
	21	24 12	0 44	24 26	0 41	14 23	41		
September	1	24 20	0 44	25 7	0 42	13 49	23 3		
	11	24 28	0 44	25 43	0 42	13 37	22 30		
	21	24 36	0 44	26 18	0 42	13 25	21 56		
October	1	24 44	0 44	26 49	0 42	13 15	21 22		
	11	24 51	0 44	27 18	0 43	13 5	20 47		
	21	24 59	0 44	27 43	0 43	12 57	20 11		
November	1	25 8	0 44	28 5	0 43	12 50	19 30		
	11	25 15	0 44	28 19	0 44	12 45	18 51		
	21	25 23	0 44	28 29	0 44	12 44	18 11		
December	1	25 31	0 44	28 33	0 45	12 41	17 28		
	11	25 39	0 44	28 31	0 45	12 42	16 44		
	21	25 46	0 44	28 24	0 45	12 45	16 0		
	31	25 54	0 44	28 11	0 46	12 50	15 15		

Time of High-Water at LONDON in the morning and afternoon of every day in the year.

Mo. Days	JANUARY				FEBRUARY				MARCH				APRIL				Mo. Days
	morn.		aftern.		morn.		aftern.		morn.		aftern.		morn.		aftern.		
	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
1	4	19	4	35	4	53	5	10	3	58	4	14	4	59	5	21	1
2	4	53	5	11	5	29	5	47	4	30	4	48	5	44	6	12	2
3	5	26	5	46	6	13	6	34	5	7	5	28	6	4	7	13	3
4	6	7	6	30	7	5	7	30	5	51	6	17	7	45	8	20	4
5	6	54	7	19	8	6	8	40	6	46	7	16	8	57	9	35	5
6	7	46	8	10	9	18	9	56	7	49	8	26	10	19	10	51	6
7	8	48	9	22	10	35	11	13	9	4	9	42	11	20	11	56	7
8	9	58	10	33	11	52			10	21	10	58			0	26	8
9	11	9	11	45	0	27	1	0	11	35			0	56	1	26	9
10		0	22		1	34	2	4	0	10	0	44	1	5	2	1	10
11	0	55	1	27	2	30	2	55	1	14	1	43	2	42	3	2	11
12	1	57	2	30	3	15	3	32	2	11	2	38	3	19	3	35	12
13	2	56	3	15	3	49	4	5	2	58	3	16	3	51	4	7	13
14	3	34	3	51	4	24	4	44	3	34	3	50	4	2	4	46	14
15	4	10	4	29	5	3	5	22	4	7	4	24	5	6	5	26	15
16	4	50	5	1	5	44	6	8	4	43	5	3	5	48	6	12	16
17	5	31	5	53	6	33	7	0	5	23	5	44	6	39	7	3	17
18	5	56	6	43	7	27	7	57	6	9	6	35	7	30	7	58	18
19	7	8	7	35	8	27	9	0	7	1	7	29	8	26	8	5	19
20	8	4	8	36	9	32	10	5	7	58	8	29	9	27	9	58	20
21	9	7	9	39	10	35	11	5	9	0	9	31	10	27	10	54	21
22	10	10	10	41	11	35			10	2	10	33	11	23	11	51	22
23	11	12	11	44	0	4	0	31	11	3	11	32			0	17	23
24		0		3	0	55	1	19	11	59			0	42	1	7	24
25	0	39	1	4	1	41	2	3	0	25	0	50	1	31	1	56	25
26	1	28	1	53	2	24	2	42	1	13	1	35	2	20	2	4	26
27	2	15	2	35	3	0	3	15	1	57	2	19	3	0	3	18	27
28	2	53	3	5	3	30	3	44	2	41	2	59	3	35	3	52	28
29	3	24	3	35					3	15	3	30	4	9	4	30	29
30	3	51	4	5					3	45	4	1	4	53	5	15	30
31	4	19	4	36					4	17	4	37					31

This Table may serve the following Places, by adding

	h	m
For Tinnmouth Haven, Hartle-pool, and Amsterdam	0	30
Brest	—	1
Scilly	—	45
Mount's Bay	—	55
Bridlington Pier and Humber	2	0

Time of High-Water at LONDON in the morning and afternoon of every day in the year.

Mo. Days	MAY				JUNE				JULY				AUGUST				Mo. Days
	morn.		aftern.		morn.		aftern.		morn.		aftern.		morn.		aftern.		
	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
1	5	39	6	7	7	21	7	52	7	48	8	18	9	22	9	55	1
2	6	37	7	7	8	23	8	56	8	51	9	24	10	29	11	1	2
3	7	39	8	13	9	29	10	2	9	59	10	31	11	32			3
4	8	48	9	23	10	35	11	7	11	0	11	32	0	2	0	30	4
5	10	0	10	34	11	38					0	3		56	1	20	5
6	11	6	11	38	0	8	0	36	0	31	0	58	1	45	2	8	6
7			0	10	1	3	1	29	1	24	1	49	2	29	2	48	7
8	0	38	1	5	1	55	2	2	2	13	2	36	3	4	3	19	8
9	1	32	1	57	2	42	3	1	2	54	3	10	3	34	3	47	9
10	2	22	2	44	3	18	3	33	3	26	3	41	4	0	4	13	10
11	3	4	3	21	3	49	4	3	3	55	4	8	4	29	4	46	11
12	3	38	3	53	4	21	4	38	4	24	4	41	5	3	5	20	12
13	4	10	4	27	4	56	5	13	4	57	5	14	5	40	6	2	13
14	4	45	5	5	5	32	5	51	5	32	5	51	6	26	6	52	14
15	5	24	5	44	6	12	6	35	6	12	6	35	7	20	7	50	15
16	6	7	6	31	6	57	7	20	6	59	7	24	8	24	9	0	16
17	6	55	7	19	7	45	8	12	7	52	8	22	9	33	10	16	17
18	7	45	8	12	8	41	9	11	8	54	9	29	10	50	11	33	18
19	8	40	9	9	9	42	10	15	10	3	10	40			0	9	19
20	9	38	10	8	10	47	11	19	11	17	11	53	0	44	1	16	20
21	10	37	11	6	11	51					0	28	1	46	2	16	21
22	11	36			0	23	0	54	1	0	1	32	2	43	3	3	22
23	0	5	0	30	1	24	1	54	2	3	2	33	3	22	3	40	23
24	0	59	1	25	2	24	2	48	2	56	3	17	3	57	4	16	24
25	1	52	2	18	3	10	3	30	3	35	3	54	4	35	4	54	25
26	2	44	3	5	3	49	4	9	4	10	4	30	5	14	5	37	26
27	3	24	3	42	4	28	4	49	4	52	5	13	6	1	6	26	27
28	4	0	4	22	5	11	5	34	5	34	5	5	6	54	7	23	28
29	4	44	5	6	5	58	6	24	6	23	6	48	7	52	8	24	29
30	5	29	5	55	6	52	7	26	7	16	7	4	8	57	9	30	30
31	6	24	6	54					8	16	8	47	10	3	10	24	31

	Adding					h	m
For Fowey, Loo and Plymouth	—	—	—	—	—	3	10
Dartmouth, Harbrough and Hull	—	—	—	—	—	3	30
Torbay and Tinmouth	—	—	—	—	—	3	40
Exmouth, Topsham and Lime	—	—	—	—	—	3	50
Weymouth	—	—	—	—	—	4	20
Bridgewater and Texel	—	—	—	—	—	4	40
Portland and Hartlew	—	—	—	—	—	5	50

Time of High-Water at LONDON in the morning and afternoon of every day in the year.

Mo. Days	SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER				Mo. Days
	morn.		aftern.		morn.		aftern.		morn.		aftern.		morn.		aftern.		
	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
1	11	5	11	35	11	37			0	17	0	41	0	20	0	45	1
2			0	5	0	4	0	30	1	4	1	27	1	12	1	38	2
3	0	31	0	15	0	53	1	15	1	50	2	14	2	4	2	30	3
4	1	19	1	41	1	38	2	0	2	34	2	55	2	50	3	10	4
5	2	4	2	26	2	22	2	41	3	12	3	29	3	30	3	48	5
6	2	43	2	59	2	58	3	13	3	46	4	2	4	7	4	26	6
7	3	14	3	29	3	29	3	43	4	22	4	43	4	47	5	10	7
8	3	43	3	56	3	58	4	13	5	4	5	26	5	34	5	58	8
9	4	10	4	27	4	32	4	53	5	52	6	20	6	25	6	53	9
10	4	44	5	3	5	13	5	35	6	48	7	16	7	22	7	51	10
11	5	23	5	44	6	1	6	29	7	51	8	25	8	23	8	55	11
12	6	9	6	36	6	59	7	30	9	0	9	36	9	29	10	3	12
13	7	5	7	35	8	5	8	41	10	10	10	43	10	36	11	8	13
14	8	11	8	49	9	19	9	58	11	17	11	51	11	40			14
15	9	28	10	8	10	34	11	8			0	21	0	12	0	41	15
16	10	46	11	23	11	43			0	50	1	17	1	8	1	36	16
17	11	48			0	16	0	47	1	43	2	0	2	2	2	26	17
18	0	32	1	4	1	16	1	44	2	36	3	16	2	49	3	7	18
19	1	33	2	2	2	11	2	35	3	15	3	31	3	24	3	40	19
20	2	30	2	51	2	57	3	15	3	48	4	25	3	55	4	12	20
21	3	10	3	48	3	32	3	49	4	23	4	42	4	28	4	45	21
22	3	45	4	23	4	5	4	25	5	2	5	22	5	3	5	21	22
23	4	20	4	40	4	45	5	5	5	42	6	3	5	39	6	0	23
24	5	2	5	23	5	26	5	50	6	28	6	51	6	21	6	43	24
25	5	44	6	5	6	16	6	41	7	15	7	40	7	5	7	29	25
26	6	37	7	3	7	7	7	34	8	6	8	33	7	53	8	21	26
27	7	32	7	59	8	3	8	32	9	2	9	31	8	49	9	19	27
28	8	34	9	4	9	1	9	31	10	1	10	28	9	50	10	20	28
29	9	38	10	10	10	1	10	29	10	55	11	25	10	50	11	23	29
30	10	39	11	10	10	56	11	24	11	54			11	56			30
31					11	52							0	26	0	56	31

Subtracting

h m

For Leigh, Maes, and Gouries Gut	—	—	—	—	0	5
Gravefend, Rochester, and Rammekins	—	—	—	—	1	20
Buoy of the Nore and Flushing	—	—	—	—	1	30
Portsmouth, Ostend, Shoe-Bacon, and Red-Sand	—	—	—	—	2	0
Harwich, Dover, Spithead, and Calais	—	—	—	—	3	0
Gunfleet, Hastings, Shoreham, Orfordness, and Diepe	—	—	—	—	4	0
Yarmouth Pier and Needle	—	—	—	—	4	40
St. Helen's and Havre-de-Grace	—	—	—	—	5	30

The Eclipses of Jupiter's

JANUARY	FEBRUARY	MARCH	APRIL
Immersions	Immersions	Immersions	Immersions
1 22 4 51	2*18 24 57	1 7 31 36	2 4 11 29
3 16 32 22	4 12 53 4	3 2 0 21	3 22 40 27
5 10 59 54	6 7 21 18	4 20 29 6	5 17 9 23
7 5 27 28	8 1 49 33	6*14 57 53	7 11 38 19
8 23 55 3	9 20 17 50	8 9 26 42	9 6 7 16
10*18 22 39	11 14 46 10	10 3 55 32	11 0 36 13
12 12 50 19	13 9 14 32	11 22 24 23	12 19 5 8
14 7 17 57	15 3 42 58	13*16 53 14	14*13 34 3
16 1 45 39	16 22 11 24	15 11 22 6	16 8 2 58
17 20 13 23	18*16 39 54	17 5 51 0	18 2 31 52
19 14 41 11	20 11 8 26	19 0 19 55	19 21 0 46
21 9 8 59	22 5 37 0	20 18 48 51	21*15 29 39
23 3 36 52	24 0 5 36	22*13 17 47	23 9 58 31
24 22 4 46	25 18 34 15	24 7 46 44	25 4 27 21
26*16 32 42	27 13 2 55	26 2 15 42	26 22 56 9
26 11 0 42		27 20 44 40	28 17 24 56
30 5 28 45		29*15 13 36	30*11 53 43
31 23 56 50		31 9 42 32	
MAY	JUNE	JULY	AUGUST
Immersions	Emerfions	Emerfions	Emerfions
2 6 22 29	1*10 36 7	1 12 38 34	2* 9 14 33
4 0 51 12	3 5 4 32	3 7 7 2	4 3 43 30
5 19 19 54	4 23 32 56	5 1 35 31	5 22 12 30
7*13 48 36	6 18 1 18	6 20 4 0	7 16 41 30
9 8 17 18	8*12 29 42	8 14 32 30	9 11 10 33
11 2 45 57	10 6 58 3	10 9 1 1	11 5 39 37
12 21 14 34	12 1 26 25	12 3 29 35	13 0 8 41
14 15 43 10	13 19 54 46	13 21 58 10	14 18 37 47
16*10 11 45	15 14 23 6	15 16 26 47	16 13 6 56
Emerfions	17 8 51 26	17*10 55 26	18 7 36 6
18 6 48 20	19 3 19 47	19 5 24 7	20 2 5 18
20 1 16 52	20 21 48 8	20 23 52 49	21 20 34 31
21 19 45 23	22 16 16 31	22 18 21 32	23 15 3 45
23* 4 13 54	24*10 44 55	24 12 50 18	25 9 33 0
25 8 42 24	26 5 13 19	26 7 19 5	27 4 2 16
27 3 10 53	27 23 41 44	28 1 47 54	28 22 31 34
28 21 39 19	29 18 10 9	29 20 16 45	30 17 0 53
30 16 7 1		31 14 45 38	

first Satellite for 1793.

SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Emerfions	Emerfions		
1 11 30 13	1 13 48 46		
3 5 59 33	3 8 18 0		
5 0 28 52	5 2 47 12		
6 18 58 13	6 21 16 22	The Satel- lites of Jupi- ter will not be vifible this month, Jupiter being too near the Sun.	The Eclipses of Jupiter's Satellites will not be vifible this Month, Jupiter being too near the Sun.
8 13 27 34	8 15 45 3		
10 7 56 56	10 10 14 39		
12 2 26 17	12 4 43 45		
13 20 55 39	13 23 12 48		
15 15 24 59	15 17 41 50		
17 9 54 20	17 12 10 49		
19 4 23 40	19 6 39 45		
20 22 53 1	21 1 8 39		
22 17 22 21	22 19 37 31		
24 11 51 40	24 14 6 21		
26 6 20 59	26 8 35 8		
28 0 50 6	28 3 3 53		
29 19 19 32	29 2 32 30		
	31 16 1 17		

The Times of the Eclipses contained in this Table, are adapted to the Meridian of the Royal Observatory at Greenwich, and afford an excellent Method to discover the Longitude, or Difference of Meridians, between that and any other Place; which I shall illustrate by an EXAMPLE;

Suppose on the 26th Day of September of this Year, the Time of the Immersion of Jupiter's first Satellite be observed (by a Telescope) in an unknown Meridian, to happen at 8 h. 9 min. 19 sec.; I find by the Table, that the Time of the Immersion will happen at the British Observatory, at 6 h. 20 min. 59 sec. the same day: The Difference of the Times is 1 hour 48 min. 20 sec. which being converted into Degrees and Minutes of the Equator, will make 27 deg. 5 min. the Longitude of the Place of Observation, to the East, because the Time is more than that at the British Observatory.

N. B. Those marked with an Asterisk are visible at Greenwich.

Speculum Phænomenorum

JANUARY		FEBRUARY		MARCH	
1	♂ ☉ ♀ 1h.	1	♂ in ☉	4	♂ ♀ ☉ 2h.
2	☉ in perige	4	♂ ♀ ☉ 16h.	10	♂ ☉ ♀ 20h.
8	♂ ♀ ☉ 0h.	8	♂ ♀ ☉ 17h.	11	♂ ♀ ☉ 15h.
10	♂ ♀ ☉ 14h.	9	♂ ☉ ♀ 10h.	11	☉ ecl. invisible
12	♂ stationary	9	♀ in ☉	11	☉ in apoge
13	♂ ☉ ☉ 18h.	11	♂ in aphelio	12	♂ ☉ ☉ 18h.
14	♂ ☉ ☉ 13h.	11	♂ ☉ ☉ 18h.	12	♀ in perihelio
14	☉ ☉ ☉ 18h.	13	☉ in apoge	14	♂ ☉ ☉ 10h.
15	☉ in apoge	10	♂ ☉ ☉ 10h.	15	♂ ☉ ☉ 5h.
18	♂ ☉ ☉ 7h.	14	♂ ☉ ☉ 18h.	17	♀ stationary
18	☉ in ☉ 23h. 58m.	17	☉ in ☉ 14h. 46m.	17	♂ in ☉
24	♂ elong. max.	18	☉ ☉ ☉ 11h.	18	♀ elong. max.
30	☉ in perige	25	☉ ecl. visible	9	☉ in ☉ 15h. 8m.
		26	☉ in perigeo	25	☉ in perige
				27	♂ in perihelio
				31	♂ ♀ ☉ 8h.
APRIL		MAY		JUNE	
5	♂ elong. max.	2	♂ in ☉	1	♀ in ☉
7	☉ in apoge	4	☉ in apoge	5	♂ ☉ ☉ 5h.
10	♂ ☉ ☉ 17h.	5	♀ stationary	5	♂ ☉ ☉ 21h.
11	♂ ☉ ☉ 2h.	8	♂ ☉ ☉ 16h.	6	♂ ☉ ☉ 10h.
11	♂ ☉ ☉ 12h.	8	♂ ☉ ☉ 4h.	7	♂ ☉ ☉ 12h.
13	♂ ☉ ☉ 13h.	8	♂ stationary	13	☉ in perigeo
15	♂ stationary	8	♂ in aphelio	17	♀ stationary
19	☉ in ☉ 3h. 51m.	9	♂ ☉ ☉ 15h.	17	♂ in ☉
21	☉ in perige	9	☉ ☉ ☉ 12h.	20	♂ ♀ ☉ 17h.
24	♂ ☉ ☉ 16h.	11	♂ ☉ ☉ 12h.	20	☉ in ☉ 13h. 10m.
25	♂ ☉ ☉ 2h.	13	♂ ☉ ☉ 5h.	24	♂ ☉ ☉ 17h.
27	♂ ♀ ☉ 10h.	17	♂ ☉ ☉ 2h.	28	☉ in apogeo
28	♂ in ☉	18	☉ in perige	30	☉ in aphelio
		20	☉ in ☉ 4h. 26m.		
		22	♂ elong. max.		
		24	♂ ☉ ☉ 13h.		
		27	♂ ☉ ☉ 11h.		
		31	☉ in apogeo		

ad Annum 1793.

JULY		AUGUST		SEPTEMBER	
2	♂ ♀ 17h.	2	♂ ♀ 4h.	2	♂ ♀ 2h.
3	♀ in aphelio	2	♂ elong. max.	4	♂ ♀ 6h.
4	♂ ♀ 4h.	3	♂ in aphelio	4	☉ ecl. visible
6	♂ ♀ 9h.	4	♂ ♀ 2h.	4	♂ in perigeo
9	♂ ♀ 2h.	6	♀ elong. max.	9	♂ stationary
12	☉ in perigeo	7	☉ ♀ 3h.	11	♂ ♀ 4h.
18	♂ ♀ 3h.	8	♂ ♀ 16h.	12	♂ in ☉
18	♂ stationary	8	☉ in perigeo	16	♂ elong. max.
22	☉ in ☉ oh 4m.	14	♂ ♀ 11h.	17	♂ in perihelio
25	☉ in apogeo	15	☉ ♀ 7h.	18	☉ in apogeo
25	♂ in ☉	16	♂ ☉ 5h.	21	♀ in ☉
30	♂ ♀ 1h.	17	♂ stationary	2	♂ ♀ 16h.
		21	☉ clip. in vis.	22	☉ in ☉ 2h. 58m.
		21	☉ in apogeo	30	♂ ♀ 18h.
		22	☉ in ☉ 6h. 28m.	30	♂ ♀ 21h.
		26	♂ ♀ 6h.		
		28	♂ stationary		
		30	♂ ☉ 19h.		
		31	♂ ♀ 19h.		
OCTOBER		NOVEMBER		DECEMBER	
2	☉ in perigeo	3	♂ ☉ 18h.	3	♂ ♀ 4h.
4	♂ ♀ 1h.	4	♂ ♀ 8h.	4	♂ ♀ 10h.
8	♂ ♀ 13h.	5	♂ ♀ 5h.	4	♂ ☉ 1h.
13	♂ ☉ 9h.	11	☉ in apogeo	6	♂ stationary
15	☉ in apogeo	16	♂ ♀ 5h.	6	♂ in aphelio
20	♂ ♀ oh.	19	☉ ♀ 19h.	8	☉ in apogeo
21	♂ in ☉	21	☉ in ☉ 7h. 8m.	10	♂ in ☉
22	☉ in ☉ 10h. 56m.	25	☉ in perigeo	11	♂ ♀ 8h.
24	♀ in perihelio	27	♂ ♀ 8h.	14	♂ in perihelio
29	♂ ♀ 13h.	27	♂ elong. max.	16	♂ ☉ 7h.
29	☉ in perigeo	30	♂ ♀ 17h.	20	☉ in ☉ 19h. 29m.
31	♂ ♀ 11h.			22	☉ in perigeo
31	♂ in aphelio			25	♂ ♀ 21h.
				25	☉ in perihelio
				27	♂ stationary
				30	♂ ♀ 21h.
				30	♂ ♀ 18h.
				31	♂ ♀ 1h.

A Table of the Sun's semi-diurnal Arches, or Times

The Sun's Declination North.

Degr.	Lat. 49		Lat. 50		Lat. 51		Lat. 52		Lat. 53		Lat. 54	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	6	8	6	8	6	8	6	9	6	9	6	9
2	6	12	6	13	6	13	6	14	6	14	6	15
3	6	17	6	18	6	18	6	19	6	19	6	20
4	6	22	6	22	6	22	6	24	6	25	6	25
5	6	26	6	27	6	27	6	29	6	30	6	31
6	6	31	6	32	6	33	6	34	6	36	6	37
7	6	36	6	37	6	38	6	40	6	41	6	43
8	6	41	6	42	6	43	6	45	6	47	6	48
9	6	45	6	47	6	48	6	50	6	52	6	54
10	6	50	6	52	6	54	6	56	6	58	7	0
11	6	55	6	57	6	59	7	1	7	3	7	6
12	7	0	7	2	7	4	7	7	7	9	7	12
13	7	5	7	7	7	10	7	12	7	15	7	18
14	7	10	7	13	7	15	7	18	7	21	7	24
15	7	15	7	18	7	21	7	24	7	27	7	31
16	7	21	7	24	7	27	7	30	7	33	7	37
17	7	26	7	29	7	33	7	36	7	40	7	44
18	7	31	7	35	7	38	7	42	7	46	7	51
19	7	37	7	41	7	45	7	49	7	53	7	58
20	7	43	7	47	7	51	7	55	8	0	8	5
21	7	49	7	53	7	57	8	2	8	7	8	12
22	7	55	7	59	8	4	8	9	8	14	8	20
23	8	1	8	6	8	11	8	16	8	22	8	28
24	8	7	8	12	8	18	8	24	8	30	8	36

By these Tables the Times of the Sun's Rising and Setting may be found, in any Part of the Kingdom of *Great-Britain* or *Ireland*, after the following Manner: Where the Latitude of the Place is known, take the Sun's Declination out of the Table, on the Noon of the Day you desire to know the Time of his Rising and Setting; and with it, according as it is either North or South, enter these Tables in the Left.

of his visible half Duration above the Horizon.

The Sun's Declination South.

Degr.	Lat. 49		La. 50		Lat. 51		Lat. 52		Lat. 53		Lat. 54	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	5	59	5	59	5	58	5	58	5	58	5	58
2	5	54	5	54	5	53	5	53	5	53	5	53
3	5	49	5	49	5	49	5	48	5	48	5	47
4	5	45	5	44	5	44	5	43	5	42	5	42
5	5	40	5	39	5	39	5	38	5	37	5	36
6	5	35	5	35	5	34	5	33	5	31	5	30
7	5	31	5	30	5	29	5	27	5	26	5	25
8	5	26	5	25	5	23	5	22	5	21	5	19
9	5	21	5	20	5	18	5	17	5	16	5	13
10	5	17	5	15	5	13	5	11	5	10	5	8
11	5	12	5	10	5	8	5	6	5	4	5	2
12	5	7	5	5	5	3	5	0	4	58	4	56
13	5	2	5	0	4	57	4	55	4	52	4	50
14	4	57	4	54	4	52	4	49	4	47	4	44
15	4	52	4	49	4	46	4	44	4	41	4	37
16	4	46	4	45	4	41	4	38	4	34	4	31
17	4	41	4	38	4	35	4	32	4	28	4	23
18	4	36	4	33	4	29	4	26	4	22	4	18
19	4	30	4	27	4	23	4	19	4	15	4	11
20	4	25	4	21	4	17	4	13	4	9	4	4
21	4	19	4	15	4	11	4	6	4	2	3	57
22	4	13	4	9	4	4	4	0	3	55	3	50
23	4	7	4	2	3	58	3	53	3	47	3	42
24	4	1	3	56	3	51	3	46	3	40	3	36

Left-hand Column, under the Word Degrees; then look the Latitude of the Place in the Top of the Table; and in that Column, against the Sun's Declination, will be found the Time of his visible half Duration above the Horizon, or Time of his Setting, correct by Refraction; then subtract the Time of his Setting from 12 Hours, the Remainder will be the Time of his Rising; double the Time of his Setting, the

A Table of the Sun's semi-diurnal Arches, or Times

The Sun's Declination North.

Deer	Lat. 55		Lat. 56		Lat. 57		Lat. 58		Lat. 59		Lat 60	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	6	9	6	10	6	10	6	10	6	11	6	11
2	6	15	6	16	6	16	6	17	6	17	6	18
3	6	21	6	22	6	22	6	23	6	24	6	25
4	6	27	6	28	6	29	6	30	6	31	6	32
5	6	32	6	34	6	35	6	36	6	38	6	39
6	6	38	6	40	6	41	6	43	6	44	6	46
7	6	44	6	46	6	48	6	49	6	51	6	53
8	6	50	6	52	6	54	6	56	6	58	7	1
9	6	56	6	58	7	1	7	3	7	5	7	8
10	7	2	7	5	7	7	7	10	7	13	7	16
11	7	8	7	10	7	14	7	17	7	20	7	23
12	7	15	7	18	7	21	7	34	7	27	7	31
13	7	21	7	24	7	28	7	31	7	35	7	39
14	7	28	7	31	7	35	7	39	7	43	7	47
15	7	34	7	39	7	42	7	46	7	51	7	56
16	7	41	7	45	7	49	7	54	7	59	8	4
17	7	48	7	52	7	57	8	1	8	7	8	13
18	7	55	8	0	8	5	8	10	8	16	8	22
19	8	2	8	7	8	13	8	19	8	25	8	32
20	8	10	8	15	8	21	8	28	8	35	8	42
21	8	18	8	24	8	30	8	37	8	45	8	53
22	8	26	8	32	8	39	8	47	8	55	9	4
23	8	34	8	41	8	49	8	57	9	6	9	16
24	8	43	8	51	8	59	9	8	9	18	9	29

the Sum will be the Length of the Day ; and double the Time of his Rising, the Sum will be the Length of the Night. But if the Latitude of the Place, and Declination of the Sun, consist of Degrees and Minutes, then a small Allowance must be made for the Minutes in both Cases, which may be done by a Person of an ordinary Capacity by a mental Proportion only. Thus, to find the Time of the Sun's Rising and Setting at

of his visible half Duration above the Horizon.

The Sun's Declination South.

	Lat. 55		Lat. 56		Lat. 57		Lat. 58		Lat. 59		Lat. 60	
Degr.	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	5	58	5	58	5	58	5	58	5	57	5	57
2	5	52	5	52	5	52	5	51	5	51	5	50
3	5	47	5	46	5	45	5	45	5	44	5	43
4	5	4	5	40	5	39	5	38	5	37	5	36
5	5	35	5	34	5	33	5	32	5	31	5	29
6	5	29	5	28	5	27	5	25	5	24	5	22
7	5	23	5	22	5	20	5	19	5	17	5	15
8	5	17	5	16	5	14	5	12	5	10	5	8
9	5	12	5	10	5	8	5	5	5	3	5	2
10	5	5	5	3	5	1	4	59	4	56	4	53
11	4	59	4	57	4	54	4	52	4	49	4	46
12	4	53	4	51	4	48	4	45	4	42	4	38
13	4	47	4	44	4	41	4	38	4	34	4	30
14	4	41	4	37	4	34	4	30	4	27	4	23
15	4	34	4	31	4	27	4	23	4	19	4	14
16	4	27	4	24	4	20	4	15	4	11	4	6
17	4	21	4	17	4	12	4	8	4	3	3	57
18	4	14	4	9	4	5	4	0	3	54	3	48
19	4	7	4	2	3	56	3	51	3	45	3	39
20	3	59	3	54	3	49	3	43	3	36	3	29
21	3	52	3	46	3	40	3	34	3	27	3	19
22	3	44	3	38	3	31	3	24	3	17	3	9
23	3	36	3	29	3	23	3	15	3	6	2	57
24	3	27	3	20	3	13	3	5	2	55	2	45

at Aberdeen in Scotland, on the Longest Day; the Latitude of that Place is accounted 57 Degr. 7 Min. North, and the Sun's Declination 23 Degr. 28 Min. likewise North. By these you will find by the Table, that 5 Min. for the Sun's Declination, and 1 Min. for the Latitude of the Place, are both, to be added to 8 Hours 49 Min. the Time belonging to 57 Degr. of Latitude and 23 Degr. of North Declination, and the Sun will be 8 Hours 55 Min. the Time of his apparent Setting at Aberdeen, on the longest Day, whose Complement to 12 Hours, viz. 3 Hours 5 Min. will be the Time of his Rising, &c.

A Table of the Sun's Right-Ascension in Time, the greatest

Degr.	♈			♉			♊			♋			♌			♍		
	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s
0	0	0	0	1	51	37	3	51	15	6	0	0	8	8	45	10	8	23
1	0	3	40	1	55	27	3	55	25	6	4	22	8	12	54	10	12	12
2	0	7	20	1	59	17	3	59	36	6	8	43	8	17	3	10	16	0
3	0	11	0	2	3	8	4	3	48	6	13	5	8	21	11	10	19	48
4	0	14	41	2	6	59	4	8	0	6	17	26	8	25	19	10	23	35
5	0	18	21	2	10	51	4	12	13	6	21	48	8	29	26	10	27	22
6	0	22	2	2	14	44	4	16	26	6	26	9	8	33	31	10	31	8
7	0	25	42	2	18	37	4	20	40	6	30	30	8	37	37	10	34	54
8	0	29	23	2	22	31	4	24	55	6	34	51	8	41	41	10	38	40
9	0	33	4	2	26	25	4	29	10	6	39	11	8	45	45	10	42	25
10	0	36	45	2	30	20	4	33	26	6	43	31	8	49	48	10	46	9
11	0	40	26	2	34	16	4	37	42	6	47	51	8	53	51	10	49	53
12	0	44	8	2	38	13	4	41	59	6	52	11	8	57	52	10	53	37
13	0	47	50	2	42	10	4	46	16	6	56	31	9	1	53	10	57	20
14	0	51	32	2	46	8	4	50	34	7	0	50	9	5	53	11	1	3
15	0	55	14	2	50	7	4	54	52	7	5	8	9	9	53	11	4	46
16	0	58	5	2	54	7	4	59	10	7	9	26	9	13	52	11	8	28
17	1	2	40	2	58	7	5	3	29	7	13	44	9	17	50	11	12	10
18	1	6	23	3	2	8	5	7	49	7	18	1	9	21	47	11	15	52
19	1	10	7	3	6	9	5	12	9	7	22	18	9	25	44	11	19	34
20	1	13	51	3	10	12	5	16	29	7	26	34	9	29	40	11	23	15
21	1	17	35	3	14	15	5	20	49	7	30	50	9	33	35	11	26	56
22	1	21	20	3	18	19	5	25	9	7	35	5	9	37	29	11	30	37
23	1	25	6	3	22	23	5	29	30	7	39	20	9	41	23	11	34	18
24	1	28	52	3	26	29	5	33	51	7	43	34	9	45	16	11	37	58
25	1	32	38	3	30	35	5	38	12	7	47	47	9	49	9	11	41	39
26	1	36	25	3	34	41	5	42	34	7	52	0	9	53	1	11	45	19
27	1	40	12	3	38	49	5	46	55	7	56	12	9	56	52	11	49	0
28	1	44	0	3	42	57	5	51	17	8	0	24	10	0	43	11	52	40
29	1	47	48	3	47	6	5	55	38	8	4	35	10	4	33	11	56	20
30	1	51	37	3	51	15	6	0	0	8	8	45	10	8	23	12	0	0

The time of the southing or meridian transits of the fixed stars in pa. 46, may be found thus. On the noon of the day, preceding the night in which you want to know the time of the southing of any of those stars, find the Sun's place in the Ephemeris, and with it take out of the above table his right ascension in time; this you may do by inspection to a minute, which will be sufficient for your present purpose: Then from the right-ascension of the star in pa. 46, subtract the right-ascension of the Sun, the remainder will be the estimate time of the star's southing, and will not differ from the true time above 2 or 3 minutes at most, which may be near enough for ordinary uses. But when great exactness is required, reduce the Sun's place to this estimate time, and with it find in the above table his right ascension to seconds, which being subtracted from that of the star, the remainder will be

1795.

Sun's Right-Ascension.

45

Obliquity of the Ecliptic being $23^{\circ} 28'$.

Degr.	♈			♉			♊			♋			♌			♍		
	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s
0	12	0	0	13	51	37	15	51	15	18	0	0	20	8	45	22	8	23
1	12	3	40	13	55	27	15	55	25	18	4	22	20	12	54	22	12	12
2	12	7	20	13	59	17	15	59	36	18	8	43	20	17	3	22	16	0
3	12	11	0	14	3	8	16	3	48	18	13	5	20	21	11	22	19	48
4	12	14	41	14	6	59	16	7	0	18	17	26	20	25	19	22	23	35
5	12	18	21	14	10	51	16	12	13	18	21	48	20	29	26	22	27	22
6	12	22	2	14	14	44	16	16	26	18	26	9	20	33	31	22	31	8
7	12	25	42	14	18	37	16	20	40	18	30	30	20	37	37	22	34	54
8	12	29	23	14	22	31	16	24	55	18	34	51	20	41	41	22	38	40
9	12	33	4	14	26	25	16	29	10	18	39	11	20	45	45	22	42	25
10	12	36	45	14	30	20	16	33	26	18	43	31	20	49	48	22	46	9
11	12	40	26	14	34	16	16	37	42	18	47	51	20	53	51	22	49	53
12	12	44	8	14	38	13	16	41	59	18	52	11	20	57	52	22	53	37
13	12	47	50	14	42	10	16	46	16	18	56	31	21	1	53	22	57	20
14	12	51	32	14	46	8	16	50	34	19	0	50	21	5	53	23	1	3
15	12	55	14	14	50	7	16	54	52	19	5	8	21	9	53	23	4	46
16	12	58	57	14	54	7	16	59	10	19	9	26	21	13	52	23	8	28
17	13	2	40	14	58	7	17	3	29	19	13	44	21	17	50	23	12	10
18	13	6	23	15	2	8	17	7	49	19	18	1	21	21	47	23	15	52
19	13	10	7	15	6	9	17	12	9	19	22	18	21	25	44	23	19	34
20	13	13	51	15	10	12	17	16	29	19	26	34	21	29	40	23	23	15
21	13	17	35	15	14	15	17	20	49	19	30	50	21	33	35	23	26	56
22	13	21	20	15	18	19	17	25	9	19	35	5	21	37	29	23	30	37
23	13	25	6	15	22	23	17	29	30	19	39	20	21	41	23	23	34	18
24	13	28	52	15	26	29	17	33	51	19	43	34	21	45	16	23	37	58
25	13	32	38	15	30	35	17	38	12	19	47	47	21	49	9	23	41	50
26	13	36	25	15	34	41	17	42	34	19	52	0	21	53	1	23	45	19
27	13	40	12	15	38	49	17	46	55	19	56	12	21	56	52	23	49	0
28	13	44	0	15	42	57	17	51	17	20	0	24	22	0	43	23	53	40
29	13	47	48	15	47	6	17	55	38	20	4	35	22	4	33	23	56	20
30	13	51	37	15	51	15	18	0	0	20	8	45	22	8	21	24	0	0

the true time of the star's culminating or southing. And if from the time of the star's southing you subtract the semidiurnal arc belonging to it, the remainder will be the time of the star's rising; and being added to it, the sum will be the time of its setting.

Annexed is an Ex. of SIRIUS for Jan. 31, 1792.

☉'s place at noon $12^{\circ} 11'$		h	m	s
☉'s rt. asc. of Sirius	-	6	35	52
☉'s rt. asc. subtract	-	0	53	21
*'s estimate southing	-	9	37	2
☉'s rt. asc. at that time sub.	-	1	0	45
*'s true southing	-	9	35	17
Semid. arc sub. & add	-	4	36	52
*'s rising aftern.	-	4	58	2
*'s setting	-	4	12	08

A Table of the mean Right-Ascensions in time, Semidurnal-Arcs, Declinations, and Magnitudes of 40 remarkable fixed Stars, with their Names, and Bayer's Literal Characters, for January 1, 1790.

Names of the Stars	Ch.	Rt. Asc.			Declination			Semid Ar.			Ma	
		h	m	s	°	'	"	h	m	s		
Pole star, Alruccabah -	α	0	48	57	88	11	34	n	fets	not	2	
Andromeda's girdle, Mirach -	β	0	57	48	34	2	47	n	10	7	32	2
Andromeda's left foot, Almach	γ	1	51	10	41	18	41	n	fets	not	2	
Ram's following horn -	α	1	55	18	22	27	43	n	8	9	35	2
Whale's jaw, Menkar -	α	2	51	19	3	15	11	n	6	19	48	2
Medusa's head, Algol - -	β	2	54	32	40	7	41	n	fets	not	2	
Perseus's right side, Algenib	α	3	9	26	49	7	6	n	fets	not	2	
Brightest of the 7 stars -	η	3	35	2	23	26	22	n	8	16	40	3
Bull's south eye, Aldebaran	α	4	23	51	16	4	19	n	7	28	51	1
Auriga's left shoulder, Capella	α	5	1	11	45	46	57	n	fets	not	1	
Orion's left foot, Rigel -	β	5	4	27	8	27	38	s	5	20	28	1
Bull's north horn - -	β	5	12	57	28	25	12	n	8	57	1	2
Orion's left shoulder, Bellatrix	γ	5	13	54	6	8	50	n	6	34	41	2
Orion's girdle - -	ϵ	5	25	32	1	21	22	s	5	56	42	2
Orion's right shoulder, Betelgeuse	α	5	43	46	7	21	2	n	6	40	58	1
In the great Dog's mouth, Sirius	α	6	35	58	16	25	8	s	4	36	55	1
Head of the 1st Twin, Castor	α	7	21	11	32	19	57	n	9	38	21	1
In the less Dog's thigh, Procyon	α	7	28	21	5	46	33	n	6	32	50	1
Head of the 2d Twin, Pollux	β	7	32	30	28	31	19	n	8	58	13	2
Hydra's heart, Alphard -	α	9	17	15	7	45	30	s	5	24	20	2
Lion's heart, Regulus -	α	9	57	11	12	58	43	n	7	11	28	1
Great Bear, Lower Pointer.	β	10	49	4	57	30	19	n	fets	not	2	
Great Bear, Upper Pointer -	α	10	50	39	62	53	25	n	fets	not	2	
Lion's tail, Deneb - -	β	11	38	24	15	44	22	n	7	27	18	2
Great Bear, 1st in the tail, Aliath	ϵ	12	45	5	57	7	0	n	fets	not	2	
Virgus's spike - -	α	13	14	10	10	3	38	s	5	12	20	1
Dragon's tail - -	α	13	58	42	65	20	53	n	fets	not	2	
Bootes, Arcturus -	α	14	6	11	20	20	20	n	7	55	26	1
Libra, Southern Scale - -	α	14	39	22	15	9	30	s	4	44	23	2
Libra, Northern Scale - -	β	15	5	47	8	36	4	s	5	19	57	2
Bright star in the North Crown	α	15	25	49	27	25	35	n	8	48	36	2
Scorpion's heart, Antares	α	16	16	35	25	56	54	s	3	34	6	1
Hercules's head, Raf. Algethi	α	17	5	7	14	38	4	n	7	20	41	2
Head of Serpentarius - -	α	17	25	8	12	43	20	n	7	9	50	2
Dragon's head, Rasiaben -	γ	17	51	51	51	31	28	n	fets	not	2	
Bright star in the Harp, Lyra	α	18	29	45	38	35	39	n	fets	not	1	
Bright star in the Eagle, Atair	α	19	40	25	8	18	55	n	6	45	57	2
Mouth of south Fish, Fomalhaut	α	22	45	53	30	43	12	s	2	52	6	1
Pegasus's wing, Markab -	α	22	54	15	14	4	11	n	7	17	10	2
Andromeda's head - -	α	23	57	29	27	55	38	n	8	52	19	2

A Table of the Longitudes, Latitudes, and Magnitudes of the most remarkable fixed Stars that the Moon can Eclipse, or make a near Appulse unto; exactly rectified to the beginning of the year 1790.

Con.	Cha.	Long.	Lat.	Magn.	Con.	Cha.	Long.	Lat.	Magn.
		° ' "	° ' "				° ' "	° ' "	
♈	♈	11 13 11	2 9 44 n	4	♈	♈	12 9 29	0 21 48 n	2
	♈	14 36 25	1 5 37 n	4	♈	♈	18 4 37	1 49 14 s	3
	♈	16 56 25	0 13 11 s	4	♈	♈	22 12 9	4 24 41 n	3
♈	♈	17 54 44	1 48 7 n	4	♈	♈	24 26 33	4 2 52 n	4
	♈	27 3 44	4 1 36 n	3		♈	24 49 47	0 1 1 n	4
	♈	2 52 0	5 45 30 s	3		♈	26 56 12	3 29 24 n	4
	♈	5 31 37	2 35 37 s	3		♈	27 32 46	0 6 53 n	4
	♈	6 51 20	5 29 2 s	1	♈	♈	29 38 28	1 57 17 s	3
	♈	19 38 37	5 21 59 n	2		♈	0 0 35	5 26 15 s	3
	♈	21 51 15	2 13 29 s	3		♈	0 15 33	1 2 18 n	2
♈	♈	0 30 37	0 55 4 s	4		♈	1 42 50	1 39 52 n	4
	♈	2 22 2	0 50 34 s	3		♈	4 52 13	4 0 23 s	4
	♈	5 10 20	6 46 12 s	2		♈	6 49 58	4 32 17 s	1
	♈	7 0 30	2 2 28 n	3		♈	8 31 42	6 5 21 s	4
	♈	15 35 29	0 12 19 s	3		♈	28 20 3	6 56 48 s	3
	♈	20 19 34	6 40 4 n	1		♈	0 16 58	2 22 24 n	4
♈	♈	4 36 51	3 10 22 n	4		♈	3 23 31	2 5 31 s	4
	♈	5 47 9	0 4 13 n	4		♈	7 14 48	3 55 22 s	3
	♈	18 43 23	3 1 57 s	4		♈	9 27 17	3 24 55 s	3
	♈	21 19 38	3 46 1 s	4		♈	11 54 32	5 2 33 s	3
	♈	24 58 23	4 51 9 n	4		♈	12 3 36	0 53 36 n	3
	♈	26 54 49	0 27 27 n	1		♈	13 19 21	1 28 7 n	4
	♈	3 27 25	0 8 29 n	4		♈	1 6 55	4 36 46 n	3
	♈	18 34 47	0 31 21 s	4		♈	17 16 0	4 57 31 s	4
	♈	22 6 32	3 2 51 s	4		♈	18 50 53	2 32 6 s	4
♈	♈	24 10 47	0 41 36 n	3		♈	20 36 5	2 33 40 s	3
	♈	0 26 10	5 4 42 n	3		♈	25 47 17	2 3 47 s	4
	♈	1 54 16	1 22 24 n	3		♈	0 19 42	2 43 22 n	4
	♈	7 14 41	2 48 57 n	3		♈	8 38 43	0 22 57 s	4
	♈	20 54 50	2 2 11 s	1		♈	14 12 30	1 2 8 s	4

This table shewing the mean longitudes of 60 stars to the beginning of the year 1790, their mean longitudes for any other time may be found if $50\frac{1}{2}$ seconds be added for each succeeding, and subtracted for each preceding year, and proportionably for a part of a year. Thus, to find the longitude of the first star ♈♈, or ♈♈ piscium, for Feb. 15, 1792, or 2 years and one eighth after the tabular time; here $2\frac{1}{8}$ times $50\frac{1}{2}$ sec. make $1' 47''$, which being added to the tabular longitude, gives ♈ 11° 14' 58" for the longitude required at the given time.—The latitudes vary not.

The Latitudes and Longitudes of Ninety Places.

	Lat. ° /	Long. ° /		Lat. ° /	Long. ° /
Alexandria, Egypt	31 11 n	30 17 e	Isfahan	32 25 n	52 55 e
Amsterdam, Hol.	52 23 n	4 52 e	Land's end	50 6 n	5 50 w
Archangel, Ruf.	64 34 n	38 30 e	Leghorn	43 33 n	10 25 e
Ar-h-us	37 40 n	23 52 e	Leostoff	52 38 n	1 54 e
Babelmandel	12 50 n	43 50 e	Leverpool	53 22 n	3 10 w
Batavia	6 12 s	106 45 e	Lima	12 1 s	76 50 w
Bengal	22 0 n	92 45 e	Lisbon	38 42 n	9 4 w
Berlin	52 33 n	13 26 e	Lizard	49 57 n	5 21 w
Bombay Isle	19 42 n	73 3 e	London	51 31 n	0 0
Boston, Amer.	42 25 n	70 37 w	Madras	13 8 n	80 7 e
Breslau	51 3 n	17 15 e	Madrid	40 25 n	3 45 w
Brest	48 23 n	4 30 w	Manila	14 30 n	120 25 e
Bristol	51 28 n	2 30 w	Marseilles	43 18 n	5 21 e
Buenos Ayres	34 35 s	58 0 w	Mexico	19 54 n	100 5 w
Cadiz	36 31 n	6 7 w	Mississipi, mouth	29 0 n	89 17 w
Calais	50 58 n	1 51 e	Moscow	55 25 n	37 51 e
Cairo, Egypt	30 2 n	31 26 e	Naples	40 51 n	14 19 e
Cambridge	52 13 n	0 4 e	Newcastle	55 0 n	1 18 w
Canaria Islands	28 1 n	15 0 w	Oporto	40 53 n	8 35 w
Canton	23 8 n	113 2 e	Orkney I. northend	59 24 n	3 23 w
Cape of Goodhope	34 29 s	18 23 e	Oxford	51 45 n	1 16 w
Cape Horn	55 59 s	67 26 w	Paris	48 50 n	2 25 e
Carthegena	10 27 n	75 26 w	Pekin	39 55 n	116 22 e
Charles Town Am.	33 22 n	79 50 w	Petersburg	59 56 n	30 19 e
Constantinople	41 0 n	28 53 e	Philadelphia	39 57 n	75 18 w
Copenhagen	55 41 n	12 50 e	Plymouth	50 24 n	4 15 w
Corinth	37 30 n	23 0 e	Port Mahon	39 51 n	3 53 e
Corke	51 54 n	8 30 w	Port Royal, Jam.	17 40 n	76 37 w
Dantzic	54 22 n	18 36 e	Portsmouth	50 48 n	1 1 w
Dover	51 7 n	1 19 e	Prague	50 5 n	14 15 e
Dublin	53 20 n	6 55 w	Quebec	46 55 n	71 12 w
Edinburgh	55 58 n	3 1 w	Rome	41 54 n	12 32 e
Ferro, Isle	27 48 n	18 6 w	Silly Isles	50 0 n	6 45 w
Finisterre, Cape	42 57 n	9 36 w	Smyrna	38 28 n	27 25 e
Genoa	44 25 n	8 41 e	Stockholm	59 22 n	18 12 e
Gibraltar	36 5 n	4 46 w	Syracuse	37 4 n	15 20 e
Glasgow	55 52 n	4 5 w	Tangier	35 55 n	5 45 w
Goa	15 31 n	73 50 e	Teneriff	28 16 n	16 32 w
Göttingen	51 32 n	9 58 e	Tunis	36 47 n	10 16 e
Greenwich	51 29 n	0 5 e	Turin	45 5 n	7 45 e
Hickitt's Head.	79 55 n	12 0 e	Venice	45 27 n	12 24 e
Halifax, America	44 46 n	63 20 w	Verd. Cape	14 47 n	17 28 w
Havana	23 12 n	81 11 w	Vienha	48 11 n	16 28 e
Helena, I. St.	15 55 s	5 49 w	Upsal	59 52 n	17 43 e
Jerusalem	31 50 n	35 25 e	Uranberg	55 54 n	12 52 e

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